

PLATFORM

Professor Gareth Williams says that the Chancellor's use of Unesco statistics to make damaging international comparisons of public spending on schools was so full of howlers that it will rebound on the Government

Lies and damned lies

The nearly forgotten Green Paper on higher education attributed Britain's poor economic performance to our lack of emphasis on science and technology courses compared with our main competitors. In the event, this comparison served mainly to highlight the fact that the principle difference between Britain and her competitors was having fewer students of all kinds in higher education.

A government less prone to banana skins might have learnt the lesson and steered away from the quagmire of international comparisons. Not so. The Chancellor of the Exchequer, no less, in a full-scale parliamentary debate, has attempted to rebut demands for increased public expenditure on education with the claim that "the taxpayer and the ratepayer in this country spend roughly the same per pupil in school as West Germany does, some 20 per cent more than Japan does, and as much as 50 per cent more than

France" (*Hansard*, June 3). The most intriguing question to ask about Mr Lawson's figures is where he got them from. The answer is that they derive from the *Unesco 1985 Statistical Year Book*, which is a bit rich for a government that has recently broken from Unesco on the grounds that the UK taxpayer no longer gets value for money from that organization. It is perhaps a judgement of the gods that the Chancellor's interpretation of the figures was beset with elementary flaws.

The immediate source of the claim is a written answer to a parliamentary question from Austin Mitchell (*Hansard*, May 13) which sets out estimates of public expenditure per pupil in France, Japan and the United States. The figures are reproduced as rows 6-8 of the accompanying table. The figure for the US has been omitted: it is much higher than that of any country and like Mr Lawson we will ignore it.

In the *Hansard* version, the 13

Expenditure per pupil and per teacher (£)

	France	Germany	Japan	UK
Unesco figures adjusted to same 1982 base				
1 pre-primary	780	362	552	1,161
2 primary	754	376	756	742
3 secondary	754	376	756	742
4 combined	1,000	1,517	830	1,107
5 average	14,027	17,568	9,382	10,268
6 enrolments per teacher				

The interpretation presented to the House of Commons

	France	Germany	Japan	UK
6 pre-primary	533 (576)	n.a.	156	842
7 primary	522 (700)	n.a.	854 (939)	814
8 secondary	932 (1,240)	n.a.	938 (1,032)	1,209
9 combined	676 (900)	n.a.	824 (900)	1,025

Sources: rows 1-4, Unesco statistical year book 1985; rows 6-9, *Hansard*, May 13, 1986. Figures derived from the Unesco statistics. See text for further explanations.



Nigel Lawson (right): underestimated the cost of education in Japan

figures are accompanied by nine cautionary footnotes, most of which the Chancellor also ignored. Broadly, the table shows average expenditure in primary and secondary schools converted to pounds at 1983 exchange rates, taking account of different costs of living in different countries.

However, even after allowing for the footnotes, there are some breathtaking howlers in using these figures as a basis for the Chancellor's claims. One small problem is the Japanese "pre-first level" figure. It apparently ignores the fact that three-quarters of the pupils were in private schools (Unesco table 3.3) and not costing the taxpayer anything. The correct figure would be more like £600 per head, which would raise the Japanese overall total to about £850 (or £900 after correcting for inflation).

However, this error is insignificant compared with the effects of the use of 1983 "purchasing power parity" exchange rates to convert expenditure figures for 1980 in the case of France and 1982 in Japan and to compare these with UK 1983 figures. Between 1980 and 1983 the franc declined in value by 17 per cent against sterling. This was a period also in which

inflation was still at high levels in most countries. The minimum adjustment needed on this account is to raise the French figure by 30 per cent for inflation between 1980 and 1983, and the Japanese figure by 10 per cent. The effects of this adjustment are given in brackets.

There were also the large changes in the exchange rates. The estimates in the first half of the table come directly from the original Unesco figures. They convert expenditures at the exchange rates prevailing in the year the expenditures actually took place and all the figures have been adjusted to the same 1982 base. What remains is by no means totally reliable: for example, the balance between primary and secondary education costs in West Germany is clearly suspicious. And it can be argued that "purchasing power parity" would give more useful comparison than crude exchange rates.

However, at this technical level it can also be claimed that a price index of educational goods and services in each country should also be taken into account. Nevertheless, these estimates do avoid some of the more elementary flaws and they certainly give a rather different picture from that of the

Chancellor. Our publicly funded schools in general cost less in 1983 than those of France and West Germany, and our primary school costs were less than those of Japan. The trouble with international comparisons is that once you have the figures it is tempting to go on to make them for other purposes. For example, from the same Unesco tables we can compute average "enrolments" per teacher in primary and secondary schools. This is the fifth row of the table. British teachers cost the state very much less than those of other European countries. However, if we open the Pandora's box of international comparisons the Pandora's box opens. As a result the need for knowledge of the same way as other pupils. As a result the need for knowledge of the same way as other pupils. As a result the need for knowledge of the same way as other pupils.

science lure

The Government is to offer science students with good degrees increments of more than £1,000 in an attempt to entice them into the Civil Service.

The offer would increase the starting salary of entrants with first-class or upper-second class degrees from about £9,000 to nearly £7,100.

Gareth Williams is professor of educational administration at the University of London's Institute of Education.

Perks package in bid to attract staff

by Barry Hugill

London borough of Waltham Playfair, is proposing to spend £880,000 to bid to attract teachers to its schools.

Meeting of the education committee Monday will hear details of a plan which involves: a nursery for children; priority counselling for teachers new to the authority; better promotion prospects for staff; appointment of teachers July rather than September; and payment Scale 2 supply teachers for the school.

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ILEA seeks change of law on meetings

Mrs Frances Morrell, leader of the Inner London Education Authority, has written to the Home Secretary, Mr Douglas Hurd, calling for changes in the law so that local authorities can refuse to provide school rooms for election meetings held by racists and fascist groups.

She has also called on the Director of Public Prosecutions, Sir Thomas Hetherington, to prosecute the British National Party for incitement to racial hatred.

The BNP used an ILEA school, the John Scurr School, for an election meeting in May which ended in violence.

ILEA was opposed to the meeting taking place but the BNP obtained a High Court order stating that it was entitled to use the school under section 96 of the Representation of the People Act.

Mrs Morrell said this week that the Act, as it stood, was in conflict with the Race Relations Act which places an obligation on local authorities to promote harmonious race relations.

Schools should not be allowed to be the focus for racist propaganda, she said.

A report on the meeting produced by a senior ILEA official, Dr Tessa Blackstone, claims that the violence was deliberately created by the BNP. Dr Blackstone is critical of the police for not acting quickly enough to pre-



Frances Morrell

vent the violence.

The report has been sent to the DPP along with samples of BNP material distributed in the East London area. There is a clear case for bringing criminal charges against the BNP, said Mrs Morrell.

ILEA is seeking compensation from the BNP for damage caused to the school.

Authority 'hampering anti-racist methods'

Teachers at an East London school say that the Inner London Education Authority is hampering their attempts to devise anti-racist teaching methods.

Last term, three white pupils at the George Green comprehensive school on the Isle of Dogs were suspended after attacking an Asian pupil. An Asian probationary teacher was also the subject of racist abuse and threats.

The school governors were reluctant to suspend the boys and only did so after teachers threatened strike action. In turn, fifth-form pupils struck in support of the suspended boys.

The teachers were hoping to hold a day conference this term to help them develop ways of dealing with the racism of many pupils. But ILEA officers have told them that it must be held in their own time.

Mr Chris Pegg, chairman of the school staff association, says that he is "perplexed and bemused" at the action of the authority, well known for its anti-racist policies.

An ILEA spokesman said that it was not legally possible to close the school for a full day.

HMI worry over lack of repairs

by Bert Lodge

The poor condition of school buildings is the major concern of HMI Inspectors in a report issued last week about the effect of local authority spending policies on education in Wales.

The document also notes a slight deterioration of in-service training provision and a more serious decline in provision for probationary teachers.

Numbers of non-teaching staff have been reduced but teaching strengths are in general adequate to meet principal needs. However, some schools have taken some subjects off the curriculum and supply cover remains generally unsatisfactory.

The report says: "There is evidence over large areas of Wales of considerable deterioration in the maintenance of buildings."

The general picture in most authorities is depressing and there appears to be little hope of immediate large-scale amelioration. Because of an already considerable backlog of repairs only substantial amounts of money will clear this maintenance problem, the inspectors add.

"In secondary schools, books and other materials are increasingly worn in appearance... Financial contributions by parents continue at a high level though there are occasional signs of reluctance."

The Effects on the Education Service in Wales of Recent Legal Authority Expenditure Policies is available free from the Welsh Office, Cathays Park, Cardiff.

Inspectors' shuffle

The retirement of Mr Neil Norris, the Chief HMI for higher education has caused a reshuffle of responsibilities among the seven Chief Inspectors.

Mr David Short, an HMI for schools, takes over from Mr Norris and will be responsible for adult and continuing education, special needs in schools, colleges and higher education, ethnic minorities and disadvantaged children, prison education and young offenders.

Peggy Heeks welcomes moves to free the National Book League from its 1930s' time-warp

New faith in the Trust

There are children in infant classes with a total lack of experience needed for language development. They have no stories, no nursery rhymes, and no cultural background. Our school libraries have poor resources provision, inadequate staffing and lack of expertise, and no overall policy for learning.

1985-86 brought a decrease on the previous year of 1.6 per cent in total public library expenditure, and of 5.7 per cent in spending on professional staff.

What do we find behind the solid Victorian walls of its Wandsworth base? A director of extraordinary energy and an encyclopaedic knowledge of the book world, a centre for children's books complete with library and specialist officer, an underfunded information service, a book prize administration programme, a shelf of book lists - all maintained on a shoe-string budget. The small staff must be con-

local, fragmented and small-scale.

Yet throughout those years there has been an organization designed to promote books and reading; intended as a national co-ordinating and driving force. If you did not know this, or that the organization is called the National Book League, you are not alone. The NBL is a supreme example of an organization splendid in concept, ineffective in execution.

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gratulated on their commitment, resilience and achievements, but, set against either the potential of a national centre or national needs, the programme is puny indeed.

The NBL is caught in a time-warp, with a name, budget and image of the 1930s; a do-gooding organization that upsets nobody; a genteel club whose members still hanker for the elegance and convenience of the former Albemarle Street premises. The history is summed up in the title of Ian Norris's 1985 anniversary volume - *Sixty Precarious Years*.

That sixtieth year was, however, one of fundamental reassessment. Earlier proposals by Michael Marland formed the groundwork, consultancy work was commissioned, a working party laboured long and hard, and the results - agreed by both the executive committee and the national council - have now been made public. What is proposed is an organization simplified in structure, sharper in its objectives, clearly charged to serve the cause of books and reading. Out is the pretence of being a members' club - something increasingly hard to maintain from a base in Wandsworth; out is the unrealistic aim of creating local branches. Symbolizing the change is a new name: the Book Trust.

We are, of course, used to reorganization: it has become almost a national pastime, and at the end we often have to say "plus ça change...". There are, though, many hopeful signs that league to trust will be more than token change. The initial starting point is not just

administrative; not just the realization that committees are too large, procedures cumbersome and members' expectations not met. It is the recognition that a vast number of people are cut off from the information and experience that the printed word can bring, lacking language and information-handling skills in a country renowned for its literary heritage, powerless in a culture increasingly dependent on effective communication.

Teachers, librarians and educationists are only too well aware of those needs, yet the 1980s have seen no significant initiative in book promotion. As far as children's reading is concerned we are living off the laurels of the Bullock Report of 1975; we have seen nothing similar to that amazing evangelizing campaign mounted from Exeter in the 1960s by Sidney Robbins.

The Book Trust cannot be expected to cure a nation's ills, but it can provide the impetus for a national campaign which can be sustained in a way that individual crusades cannot be. The Trust has identified objectives which promote the use and enjoyment of books throughout life; which support the work of teachers and librarians and other national and regional bodies. It will coordinate the campaigning work of national and regional bodies, translating objectives into action. It will seek to work more closely and more effectively with the education and library fields, as well as harnessing the goodwill within the Booksellers and Publishers' Associations. The Trust will continue to look to the Arts Council

for some financial support, but will develop specific projects with the national arts associations.

As Frank Delaney hands over the reins to Tim Rix of Longman, the department is in a strong position to influence those manufacturers who still insist on adding tartrazine, as the yellow colouring is called, to their crisps, custard, pies, cheese and chewing gum, fillings and so on. The threat of moving to an alternative supplier soon should.

David Bowman, assistant director of Birmingham's environmental services, would like to see the end of bright green peas, too. He can't understand why people like to see such gaudy food on their plate. In the case of tartrazine, there is enough medical evidence that it causes hyperactive and allergic reactions in children to call for its banning.

In Berkshire, there is some conflict between financial and health interests. A move to phase out private school lunchtimes. The schools - at present about one third of the secondary schools have independent tuckshops - were not too keen to see the end of a source of income that varied from around £100 a year to over £4,000. They used this money to buy books, computer equipment, tools, design materials and so on.

But tuck shops are also in direct conflict with Berkshire's "healthy eating policy", that would like to replace crisps and Mars bars with apples and nuts. However, even Mrs Palmer admits that when a school's catering profits are marginal, it is going to be hard to resist the temptation to sell fizzy and sweets in the school canteen. These products carry the largest profit margin and are in high demand by

Yellow to go from Birmingham food

by Julia Hagedorn

With fingers and fizzy drinks won't look the same to Birmingham schoolchildren after a decision by the City Council to ban yellow colouring from food bought by its catering department.

With a budget running at £50 million, the department is in a strong position to influence those manufacturers who still insist on adding tartrazine, as the yellow colouring is called, to their crisps, custard, pies, cheese and chewing gum, fillings and so on. The threat of moving to an alternative supplier soon should.

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Canteen dilemma: Fizz and sweets earn the greatest profits

Julia Hagedorn reports how multicultural education has brought an Indian village to a Suffolk school

Taste of the subcontinent in deepest Lowestoft

Where there were once two empty classrooms at Dell primary school in Lowestoft, there is now a functioning Indian village. Its houses and alleys were resound to the hum of voices and the hypnotic swell of Indian music; a queue forms at its single well; the aroma of cooking mingles with the smell of incense; and children can be seen busy potting and printing in its workshops.

The village is part of Suffolk's contribution to multicultural education: a contribution that is all the more difficult to make in what is effectively a white authority. It is a chance for the county's school children to experience the Hindu way of life by living and working for a day in a simulated Indian village.

The project is the brainchild of the drama adviser, Patrick Redsell, and the advisory teacher for religious education, Geoff Hundleby. The latter was aware of the problems involved in teaching comparative religion to children who had no direct experience of any other way of life than their own.

"We should not just be about accommodating differences, which is difficult enough in Suffolk, but we must help youngsters to celebrate the differences and not see them as a threat."

Patrick Redsell had already had great success with his living history projects where groups of children spent a day at one of the county's ancient monuments living and working in the conditions of the period.

The two decided from the beginning that if the village were not to be seen as involve teachers in their or curriculum and help them to develop active learning methods with their pupils.

The pilot project - involving a representative cross-section of Suffolk schools - took place last year. It began with research into Asian communities in London, Leicester, Peterborough and Ipswich and continued with in-service work with teachers that introduced them to aspects of Indian life



Wooden block printing in the village

and culture through role play and practical experience.

At the same time, CDT students in their first year of an A level course began to design the village to the strictest of briefs. It had to fit into a school hall, be movable, and incorporate a main house with kitchen and workshop, a large courtyard with well, a potter's house, a shrine, replica frontages of additional houses, verandas, mock alleyways and scenic views.

The summer term was busy with visits from members of the Asian communities and work - some successful, some less so - on all the many and varied aspects of Indian life. Finally, for two weeks, the village experienced its first occupation. Workshops, run by Indians, initiated pupils into the delights of brick making, decorating

plaster walls with traditional designs, cooking, printing and potting.

Many of the same activities are now taking place in the village with groups of primary school children - courtesy of Dell which is acting as host to the village for the next year. The 195 five-to-nine-year-olds at Dell have been the first to experience a day in the life of the village.

Its infant children had celebrated a wedding the day before my visit and it was the turn of the eight- and nine-year-olds. Teachers and pupils alike threw themselves into the spirit of the day and dressed in saris and kurtas and pyjamas.

One of the teachers had cooked a traditional curry (cheating slightly by using bottled gas) and children sat cross-legged to eat it with their fingers from an assortment of yoghurt and margarine pots. Joss sticks burned at the shrine and one proud couple were bedecked in the fine clothes and jewellery of a bride and groom.

During the morning the children made pots on a wheel that was manufactured from an old car tyre - a lesson to be learned here on the Indian art of recycling. Others printed fabric using the traditional wooden blocks with intricate patterns alongside polystyrene copies that they had made for themselves.

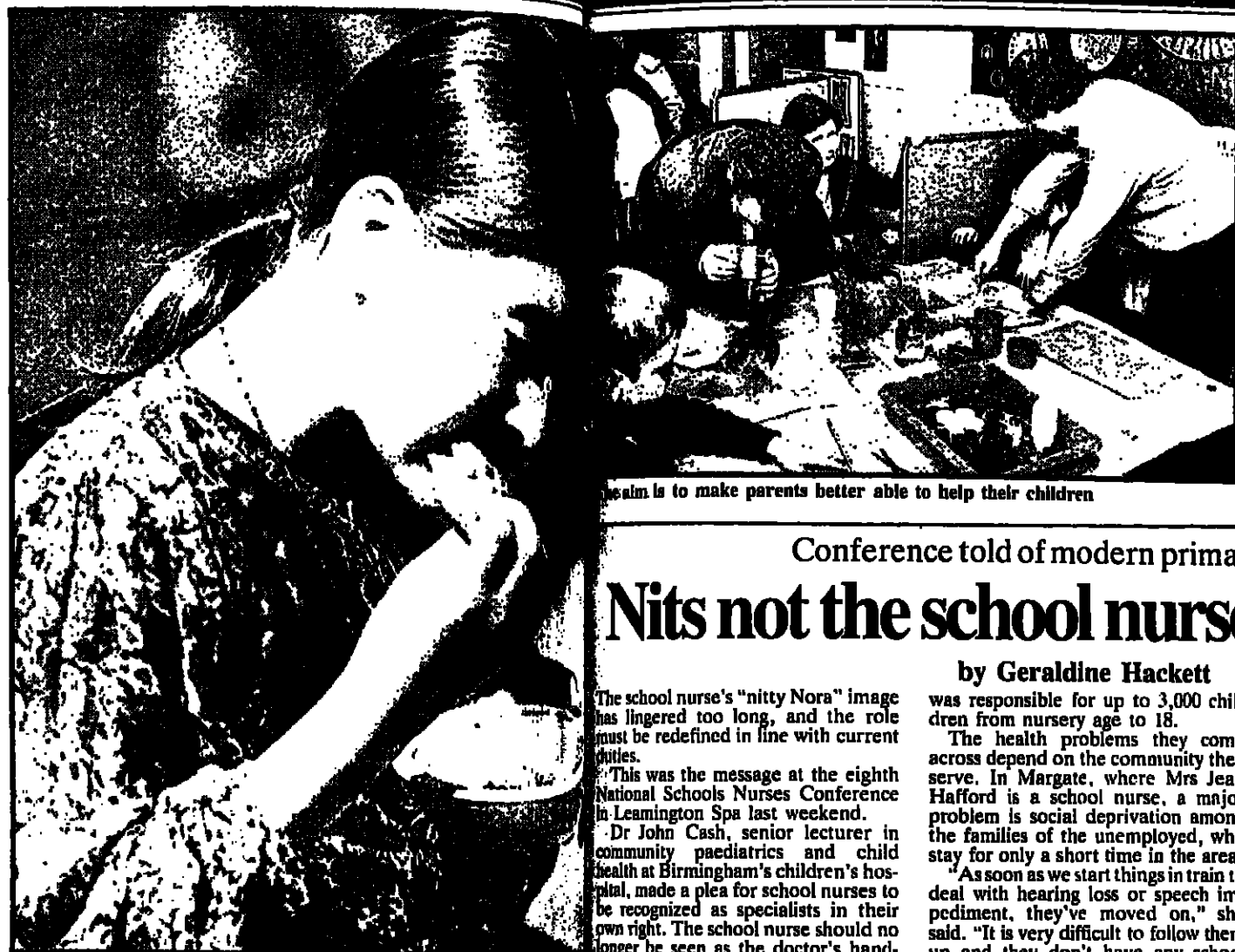
One group had been chosen to make a 10-headed effigy of Ravana to be burned ceremonially that afternoon in the school playing fields. Ravana - for those not in the know - stole the princess Sita and then succumbed to the attacking armies of the monkey god, Hanuman, sent to rescue her.

The village looked, felt, smelt and sounded authentic. Only a cynical journalist would bother to seek out the source of music and find the tape recorder hidden between the village wall and that of the original classroom - or discover that the water in the well was piped there from the mains system close at hand.

The children's work in the village was the culmination of a term-and-a-half spent researching and practising the Indian way of doing things. The classroom walls bore evidence to its success. Visits from Indian storytellers had left their mark on colourful friezes of various fictitious characters.

There were displays of Indian herbs and spices, an explanation of how the mehndi tree got its sap, and variations on the old hand and footprints so popular in primary schools. These ones were decorated with jewellery and anklets and patterned with the traditional 'tamas' designs as if for a wedding. There were displays of dandya sticks used for ceremonial dances and examples of complex geometrical designs used in some Indian fabric printing.

In one of the infant classes, some of the middle-school children involved in the pilot study had come to pass on



Tucking into an Indian meal



The 'Dog and Bone' game



Indian script work

their recently acquired knowledge on printing the Urdu script with a mixture of chalk and paint. Kite-making was in full swing: kites which, much to the children's excitement, they flew later in the school grounds.

Acting head Wayne Thomas was modest about the success of the project: "It's subtle and subconscious at this age. You can't ever get into someone else's shoes but some of these children will remember one day what they did at primary school."

His staff had grown in confidence about tackling multicultural education. At the beginning of the project, they had been reluctant to undertake work on a subject about which they knew nothing. As one of them put it: "It was in the case of the blind leading the

blind. But better things have come of it than I would ever have been possible."

Patrick Redsell and Geoff Hundleby certainly feel that the village has helped to change attitudes because the contacts that have been had with the Asian community have been so positive. There have been so many positive experiences, broken down and so, to a extent, stereotyped images have been broken down.

They are now using materials - a range of teaching materials - a video - that will give teachers practical tools. The children's similar projects. The children's village is a tentative step towards a kind of multicultural awareness that is wanted among Suffolk schools.

Conference told of modern primary health role Nits not the school nurse's only care

by Geraldine Hackett

The school nurse's "nitty Nora" image has lingered too long, and the role must be redefined in line with current duties.

This was the message at the eighth National Schools Nurses Conference in Leamington Spa last weekend.

Dr John Cash, senior lecturer in community paediatrics and child health at Birmingham's children's hospital, made a plea for school nurses to be recognized as specialists in their own right. The school nurse should no longer be seen as the doctor's handmaiden, but as the primary health worker with a doctor acting as consultant, he said.

Dr Cash also wanted to see more training for nurses to enable them to identify children with learning difficulties. As it was, school nurses saw themselves in the front line of child health. In some areas, a school nurse

was responsible for up to 3,000 children from nursery age to 18.

The health problems they come across depend on the community they serve. In Margate, where Mrs Jean Hafford is a school nurse, a major problem is social deprivation among the families of the unemployed, who stay for only a short time in the area.

"As soon as we start things in train to deal with hearing loss or speech impediment, they've moved on," she said. "It is very difficult to follow them up and they don't have any school medical records."

Mrs Ruth Reed, who works in the mining town of Aylesham in Kent, noted that the aftermath of the miners' strike had left a lot of children undernourished.

In more prosperous Stevenage, Mrs Betty Pugh, who is responsible for 2,650 children, said she saw an increasing

number of pupils from families that had split up. For the older children, she provides counselling sessions.

The operation of the school nurse service varies according to the policy of the health authority. In South Warwickshire, nurses are based in schools and wear uniforms. In Canterbury and Thanet, they work from district health offices and go out to schools. The traditional nurse's uniform is not worn.

School nurses carry out a wide range of diagnostic screening. Alongside such work they see themselves as health promoters. The commonest health problems tend to be overweight pupils and those who drink and smoke.

They are also trained to pick out the pupil whose slimming diet is beginning to develop into anorexia and detect the pupil who is sniffing glue or smoking cannabis.

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New-style parents' evening

by Jeremy Sutcliffe

Teachers and career officers in Sheffield have developed a method of consulting parents which could spell the end of the traditional parents' evening.

Instead of the usual short consultation between parents and subject teachers, parents will be split into discussion groups, briefed about their children's education and even given homework.

The changes, successfully tried out in six Sheffield secondary schools over the past five years, are a response to widespread criticism about the effectiveness of parents' evenings.

There have been complaints about long queues ending in all-too-brief

talks with teachers about subjects parents often know little or nothing about.

Such meetings may lead to misunderstandings, and it is thought many parents go away with the wrong impression of the school, their children, or the teachers. Many others, it is believed, do not bother to turn up because they think they are wasting their time.

The new system is intended to give parents a far greater say in their children's education. "We are trying to make parents more confident, more knowledgeable and able to help their children," said Mr Graham Elliott, the city's advisor for careers education.

Mr Elliott is co-author of a booklet soon to be published by the Manpower Services Commission, which sets out the way the evening should be organized.

It recommends new-style meetings for parents of first-year, third-year and fifth-year pupils at critical periods in their education.

For example, two evenings are set aside for parents of third year pupils so they can discuss subject options for fourth and fifth-year study. Each will start with a 20-minute talk, based on basic information written on a piece of paper and handed to parents. They will then be split into discussion groups of between 10 and 20.

'Gay rights' breakthrough

Civil Service unions at the DES have secured an agreement that harassment on the grounds of sexual orientation will be considered a disciplinary offence.

The unions have been concerned that subtle discrimination against gay officials might be jeopardizing their promotion prospects.

A new department policy statement, to be incorporated in the staff handbook, says discrimination is unacceptable. It is being hailed as a major breakthrough for equal opportunities within the Civil Service.

Five trade unions, representing about 2,100 of the 2,400 civil servants at the DES, have been pressing for the agreement for some time.

Mr Liz Robinson, who chairs the union side, said it was difficult to say how widespread discrimination was because often the subject was taboo or members asked union representatives not to mention it to managers.

Running a department

by Hilary Wilce

A study of how school departments are managed is being funded by the National Foundation for Educational Research, in an attempt to improve middle management in schools.

The two-and-a-half year study will aim to identify and describe successful management techniques.

It will concentrate on the use of time and resources in relation to five areas: routine administration and organization; the planning of pupils' learning experiences; monitoring and evaluating departmental work; professional development within the department; and liaison with other departments, staff and agencies.

The project will also examine the role of the departmental head in policy making in school and curriculum management and innovation within the department.

NEWS

A Government amendment to the Education Bill says sex education should take account of morals and family life. Mike Durham reports on a study of what parents think of the sex education their children now receive – and Hilary Wilce looks at a book which finds that boys could do with some education about their attitudes to girls.

Parents content with classroom sex education

An overwhelming majority of parents are satisfied with the sex education their children receive at school, according to research just completed for the Family Planning Association.

Parents want their children to learn about sex and are generally happy to leave the job to teachers, the research suggests.

The findings are based on a survey carried out for the FPA by the Policy Studies Institute, which interviewed a sample of about 200 children and their parents in three large English cities.

The researchers selected a random sample of 14-to-16-year-old boys and girls and questioned them using a detailed 60-page questionnaire on their attitudes, feelings and experiences.

The institute will not reveal details of the as yet unpublished research, but its co-ordinator, Ms Isabel Allen, said the study showed overwhelming parental support for sex education in schools.

"Parents are very keen that their children should know about bodily functions, sex and contraception," said Ms Allen. They usually preferred to leave sex education to teachers because they were embarrassed to talk about it themselves.

The survey showed enormous support for sex education classes and most teachers were satisfied with the teaching.

"What comes through is a tremendously reassuring picture," Ms

Allen said.

A spokeswoman for the FPA which sponsored the research with the Family Planning Information Service, said the study had been made because of the "total ignorance" about sex education, shown by adults.

Some people criticized sex education because they claimed it led to premature sex, while others said it was not rigorous enough. "Everybody seemed to be starting from a base of total ignorance."

"We didn't really know what was going on in school classes, apart from anecdote and rumour, so we thought it would be extremely valuable to find out just what this beast was."

"We commissioned the research to dispel myths and draw together some information on what was going on, and find out directly from children and their parents."

The association says it does not object to the proposed amendment to the Education Bill requiring sex education to be given in a moral and family context.

But the spokeswoman said: "The only thing we are slightly worried about is that the family should not be defined in a very narrow way, so that children who do not live in a nuclear family should feel anything other than normal."

The report is still being collated and will be published by the family planning agencies in full later this year.

Double standards dominate girls' lives

The lives of teenage girl pupils are ruled almost exclusively by their sexual reputation, according to a study at London schools published this week.

Ms Sue Lees, a lecturer in social psychology at the Polytechnic of North London, interviewed 100 girls at three London comprehensives, two mixed and one single-sex, and uncovered a bleak picture. Views of girls as "nice" and "respectable", or as a "cow", "slag" or "slut" were the dominating constraint on their behaviour and attitudes, she concluded.

She says schools should do far more to challenge prevailing double sexual standards.

Although Ms Lees had not intended to study their sexuality, "it gradually became clear how circumscribed girls' lives were by the mere fact of being girls... not so much in terms of actual sexual experience but in their day-to-day social life where their gender was a constant source of comment and often abuse."

In school, this sexual overlay influenced approaches to studying and careers, the use of school equipment, teachers' attitudes and classroom behaviour.

As one girl put it: "If he wants to borrow a ruler or something and we don't give it to him... he like calls you a pratt. He says: 'All right, pratt. You're so damned tight, you won't give us anything.' Then every time he comes in the lesson, they call you

"pratt, pratt, pratt" every time you do something, even if you go up and ask the teacher something."

Ms Lees says that existing social relations in schools must be challenged to begin to loosen this strait-jacket. "It is no use changing the curriculum if girls are being harassed and abused and rendered subordinate to boys in day-to-day interaction of the classroom and playground."

The kind of instance that occurs, she suggests, is when "a teacher goes into the classroom and finds 'Sandra is a slag' written on the blackboard, and he or she just rubs it off and carries on teaching Latin or whatever. But there are all sorts of ways this could be challenged, and needs to be challenged."

Far more emphasis must be given to social education, including raising questions of the morality of sexual relationships, domestic violence, double standards, and the "really disgusting words of sexual abuse that are



used", she says.

Boys, when questioned, are willing to recognize the unfairness of current sexual standards, Ms Lees says. "I do believe people can change."

However, she does not see the moral education now being promoted by the Government as an emphasis on marriage and family would offer the kind of debate.

"The problem there is that no recognition of the way in which sexual identity exists, rests on the ordination of women, and the idea would be to help girls adjust to the present institutional marriage should be to help partnership, with men being children and women in the work."

There is no common policy on these matters which affect Jewish teachers," Mr Sam Chaplain, chairman, said. As head of a school in

Redbridge, he had heard of Jewish teachers losing out on promotion when they remained true to the requirements of their faith. Sometimes they were asked to help with football on Saturdays or go on weekend courses. And some authorities seemed to have a habit of arranging meetings on Friday evenings.

The discrimination experienced was one reason why the Association of Jewish Teachers was necessary, Mr Chaplain said. Another was to offer self-confidence and support to individuals who might be the only Jewish teacher in a staffroom. "They are the standard-bearer and people turn on them."

Miss Rita Goldstone, a retired teacher, said the legal position on time off was that Jewish teachers were allowed three days with pay provided they had been obliged to accept a less responsible post to ensure time off for holy days and to get home before nightfall on Fridays in winter. To ease the situation, she has divided her teaching week between a Jewish school and a non-Jewish school.

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How Jewish teachers pay penalty for keeping faith

by Bert Lodge

A Jewish teacher revealed this week how she had been penalized for taking time off for the three principal holy days of her faith.

Miss Anne Benjamin, a middle school teacher from Borehamwood, Herts, said her pay had been docked and that she subsequently lost an incremental point. Yet other Jewish teachers in the same authority were not penalized. She was speaking at a meeting to inaugurate a new group, the Association of Jewish Teachers.

Mr Stuart Polak, education officer of the Board of Deputies of British Jews, said that Miss Benjamin's experience illustrated the current unsatisfactory state of affairs. Payment was discretionary and practice varied from one authority to another and even within the same authority.

Mrs Helen Winchester, Brent, said she had been obliged to accept a less responsible post to ensure time off for holy days and to get home before nightfall on Fridays in winter. To ease the situation, she has divided her teaching week between a Jewish school and a non-Jewish school.

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NEWS

Muslims claim GCSE bias

Allegations have been made of unfair discrimination against Muslim schoolchildren in the GCSE examination in religious studies.

Leading Muslim educationists complain that candidates wanting to be examined on Christianity alone are well provided for.

But, although the national criteria for the exam provide for candidates wanting to study another single religion, there is no exam board syllabus for Islam.

Their complaint comes in a statement this week which follows a two-day seminar earlier this year at Homerton College, Cambridge. The seminar was attended by Professor Syed Ali Ashraf, director general of the Cambridge Islamic Academy, Mr Ghulam Sarwar, director of the Muslim Educational Trust, Dr Selim Has, Muslim World League and Mr Akram Khan-Cheema, Bradford Council education adviser. Also present were representatives of the South Western Examinations Board and of the Northern and Midlands Examining Associations.

The statement also complains that the emphasis on pupils' own evaluation in the national criteria creates formidable problems for Muslims.

For example, devout Muslims would adopt a reverential response to evaluative questions on Islam which an examiner could regard as uncritical.

The educationists point out that there are similar problems for religions other than Islam.

It may be better to limit study to only two religions instead of the five or six covered by syllabuses, their statement adds.



Devout Muslims would adopt a reverential response to evaluative questions on Islam.

Islam is a complete way of life and, even at 16-plus, syllabuses ought to reflect this. Science, philosophy, mysticism, administration and political life, social and moral existence, art and architecture may have an Islamic interpretation and courses must have an accurate and annotated resources list.

"In the past too many books used in schools have unfortunately contained mistakes, misleading statements and stereotypes. Ideally such books should be written by Muslims and education-

ists working in partnership," says the statement.

In-service courses must be developed to cover the teaching of Islam. And more Muslims must be encouraged to become teachers of religious studies in secondary schools.

Islam and the GCSE examination in religious studies: areas of agreement. The Islamic Academy, 23 Metcalfe Road, Cambridge.

Case for Islamic schools

Muslims must have their own voluntary-aided schools to ensure a high standard of general education for their children while nurturing them in the beliefs and values of Islam, according to a study of educational provision for children of the faith.

Yet, Mr Mark Halstead, who conducted the study which is published this week, points out that details of what those schools would be like have never been worked out.

Mr Halstead, a former lecturer in Saudi Arabia who also taught for 12 years in Bradford schools, said that those calling for such schools need to say how the curriculum would be organized, whether existing textbooks could be used, how staff would be appointed, and if any non-Muslim

world-view would be permitted. Mr Halstead, who graduated in Oriental Studies and is now researching at Cambridge, rejects the current pattern of Muslim children going to ordinary schools and then attending the mosque in the evenings or at weekend for specifically Islamic teaching. "It creates an unacceptable split between religious and secular learning," he says. Moreover premises are often inadequate, with untrained teachers employing rote learning and corporal punishment.

The case for Muslim voluntary-aided schools: some philosophical reflections. By J M Halstead. The Islamic Academy, 23 Metcalfe Road, Cambridge, £4.

Cumbria plans to integrate

by Geraldine Hackett

Cumbria education authority plans to reorganize its special educational provision and to phase out six special schools over the next six years.

The savings from closures and a reduction in the number of pupils going to special schools outside the county – £1 million a year – will be ploughed into increasing facilities and special support units in mainstream schools.

In addition, Cumbria wants to improve its psychological service, develop a speech therapy service, and improve facilities for primary children with special needs. The working party which drew up the plan recommends that all children with mild, moderate and specific learning difficulties be taught in mainstream schools, with extra facilities provided in those schools.

Young historians

The Leverhulme Trust is giving a £76,800 grant to the Historical Association's young historian scheme. The money will be used to open young historian centres in each local education authority area.

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Union survey reveals 'gross understaffing'

by James Meikle

Birmingham teachers have complained about "gross understaffing" in the city's schools following their own survey of class sizes.

Many classes of more than 30 pupils were reported right across the age range, according to the local branch of the National Association of Schoolmasters/Union of Women Teachers. It adds that teaching groups in subjects such as maths, science and English are often too large.

The union has called for an urgent meeting with the education authority, warning that prospects for children are bleak unless the problem is tackled quickly.

Mrs Chris Keates, the union's Birmingham secretary, said: "It is useless to

persist with the current trend of the limited money available for education for a succession of new years when fundamental areas like class sizes are grossly under-resourced. It is trying to ice the cake when the cake has disappeared."

The survey covered nearly two-thirds of primary schools in Birmingham and half the secondary schools. Reception classes of more than 30 pupils were reported by 85 per cent of primary schools and 17 per cent of secondary schools. Three-quarters of primary schools had fourth-year classes with more than 30 pupils. Many more classes were also of a similar size, according to the union.

Neither of Brent's grandmothers has teaching experience, but Mrs Meikle insists: "We'll manage."

Now Nottinghamshire education chiefs are to send an education officer to Brent's home in Bradford, to assess the situation. Brent is receiving education he is receiving.

Under Section 36 of the Education Act, parents have a duty to ensure every child receives "an education suitable to his ability and aptitude, and to his general development, and to his religious and moral education."

A spokesman for Nottinghamshire Education Authority said it had a legal duty to ensure parents complied with the law. Brent's name would be entered in the school register.

support of his grandparents, who are his guardians.

His grandmother, Mrs Kathleen Bowler, says she suffers from school phobia – a dread of the classroom – which has brought bouts of violence and sickness.

She said: "He has had terrible nightmares about being forced to go to school. He would scream and shout and lock himself in the bathroom. He would throw bottles of medicine and once even threw a metal shower rail at me. But since he's stopped going to school he is different altogether."

Mrs Bowler now wants Brent to carry on his studies at home and has bought reference books or borrowed them from the library.

Inspectors check school-phobic boy

by Jeremy Sutcliffe

An education inspector is to visit a 15-year-old boy who is studying at home because of claims that he is allergic to school.

Brent Bowler has stayed away from his school, the George Spencer comprehensive in Stapleford, Nottinghamshire since last October with the full support of his grandparents, who are his guardians.

Most secondary schools can expect to have one or two children who suffer from a genuine fear of school, according to a leading child psychiatrist.

Dr Ian Berg, consultant child and adolescent psychiatrist at Leeds Infirmary, said the problem accounted for

under 1 per cent of truancy cases. It was a genuine psychiatric illness, but was treatable, he said.

One in five truants taken to court for non-attendance suffers from school phobia according to Dr Berg.

Such school refusers are non-delin-

quent and suffer from a real fear of school. Some children in this category complain to parents and teachers of medical problems. In order to stay away from school. Subsequent long investigations by doctors reveal there is nothing organically wrong with them; the real problem is anxiety.

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NEWS

Who but a fool would go into teaching these days? This year, nearly 13,000 new entrants to the profession will flood out of universities and colleges to take up jobs at rather less than can be earned by a London temporary typist.

They've had their training at a difficult time. The dispute has hampered their teaching practice, and staffroom talk has been of getting out, rather than getting on. They know full well that the public

perception of schools is of vandalized buildings in which scruffy incompetents teach peace studies to illiterate teenagers. They know – even better – that the Government has little love for the state system.

Yet they remain, on the whole, surprisingly optimistic and idealistic. Professor John Tomlinson, head of Warwick University's Institute of Education, says his students have undoubtedly encountered teachers who have asked them: "What the hell do you want to go into teaching for?"

"I think it's true to say that the profession has quite a damaging attitude towards its young at present." As a result, he feels, a slightly higher proportion of undergraduate students than usual is seriously reconsidering going into teaching. "Some of our students are very resilient people, others feel ambivalent about teaching. There always has been this sort of spread, but what the current situation has done is make those trends more pronounced."

At Exeter University, Professor Ted Nield, head of the school of education, notes a high level of optimism among his students. Yet this optimism in teaching and enthusiasm about the coming jobs is tempered by a realistic assessment of their long-term prospects.

Teaching will be all right for now, they say, but many say that when mortgages and loans, they might have to consider something

The past year may have been one of the unhappiest that the British education system has witnessed, but as Hilary Wilce reports, Exeter University's latest crop of trainee teachers remain optimistic

The class of '86

Alan Adams

Alan Adams, 34, is a post-graduate student, specializing in chemistry, who has come to teaching after 12 years working in production control at Westland Helicopters, in Yeovil.

"You talk about low morale in teaching, but people in Westlands talk about their low morale too. It seems to me there are a lot more opportunities in teaching for self-fulfilment than there are in industry, for individuals to do their own thing. In Westlands many people feel completely trapped by the system."

He graduated from the University of East Anglia, considered teaching but rejected the idea because he was apprehensive about the problem of maintaining discipline, and returned to it later through a slow route of private tutoring and part-time teaching of adults.

"My intention was to do the course in order to get a full-time job at Yeovil Technical College, but now there is a lot about teaching in secondary schools that interests me."

Financially, the move is only possible because of a supportive girlfriend, a decision by their parents to have no more children of their own beyond their six-year-old daughter, and a small mortgage.

"If I was young and single and just starting off I probably wouldn't contemplate trying to do what I'm doing."

However, he is glad he has come late to the profession. "I realize the concept of teaching is much broader than I thought. It relates to teaching about how you live life, not just to the teaching of one subject, and that makes it more interesting. It's the intellectual side that appeals to me."

Susan Galvin

Susan Galvin, 23, an undergraduate student specializing in maths, is joining the staff of a Hertfordshire comprehensive.

She has had little direct contact with schools during the pay dispute, and her last teaching practice, in common with other BED students qualifying this year, was in 1984.

"As one time I always assumed I was going to teach for ever," she said. "Now I'm not saying that. I took a summer job in an intermediate treatment centre and I enjoyed that. I might move into another field. I don't know if school is really the place for me any more."

"It's mainly me, but it's also the state



Young hopefuls: (clockwise from top left) Susan Galvin, Carol Hart, Vivienne Soutter and Roz Jarvis.

of teaching. We had Channel 4 down here during the dispute asking us lots of questions about how we felt, and whether we were demoralized, and that made us all face up to what's going on."

"Some people who were going to teach have definitely decided not to, although others who weren't, have since changed their minds."

"I suppose there's a certain amount of youthful optimism, although I'm certainly not going into it with my eyes shut."

The salary, she says, is not too bad for a single person who has been used to surviving on a student grant. "But I don't think I would go into it if it meant doing three years' probation. Seven years to be a teacher – it would be worse than a doctor! No thanks!"

Carol Hart

Carol Hart, a 21-year-old undergraduate student, has always wanted to be a primary teacher and never had any doubts about her decision, beyond a brief period of uncertainty as finals approached. She has specialized in history and has found a job in a south Essex primary school.

"Because of the low pay, she will have to live at home when she starts work. But her consolation is that she does not intend to teach for life. "I want children, and I'll stay at home with them."

"Sometimes I get a little bit fed up that my boyfriend, who's in computing, is earning more than I'll ever earn. I think: 'He's only got one A level and I've got three! He only trained for two years, and I've trained for four! But none of my friends are doing anything better than me. Some of them are in banking, but that's not a brilliant job, without A levels or a degree.'"

She is relieved the pay dispute is over. "Morally, I don't think I could strike, and I'm glad I haven't been forced into the position to choose."

She also feels that primary schools, free of controversy surrounding the General Certificate of Secondary Education and the Technical and

Vocational Education Initiative, are more cushioned from the current upheavals, than secondary schools. "Secondary teachers must sometimes really think 'What am I doing this for?'"

But she appreciates that primary schools have suffered their share of cuts. On her teaching practice she found herself in a school where there wasn't even scrap paper available for an art and craft printing project. "We had to use newspaper."

Vivienne Soutter

Vivienne Soutter, 36, is a mature post-graduate student who hopes to find a secondary school job near her family home in north Devon.

She graduated at the City University, London, in computer science, and worked in computing at the Post Office before leaving to start a family. Her children, now 11 and 9, are at boarding school, which has allowed her the chance to qualify as a maths teacher.

"My main reason for doing it is that it fits in with the children, although I also found that once my children went



Ian Cunningham

to school, I started to get interested in schooling in general."

The low salary of teachers is not a main concern for her, as a second-income earner, but she has found the job a lot harder than she thought it would be.

"There is a difficult atmosphere in schools. The main thing I found on my teaching practice was that teachers just weren't having the chance to get together, so I didn't benefit as much, because I couldn't get together with them. The pupils were also missing lessons, so you didn't see them for days."

She was also surprised by the behaviour of the children. "There seems to be a feeling now that they needn't bother too much with schooling, and I think they've lost a lot of respect for teachers recently."

Ian Cunningham

Ian Cunningham, 23, is to teach German at a church-aided comprehensive in Chorley, Lancashire. A post-graduate student, he intends to stay in the profession if he continues to enjoy the job.

However, he acknowledges it would be very difficult to support a family on a teacher's salary, without a working wife. "This is just what I want to do, personally, at the moment. I've got no commitments to think of."

His teaching practice in Tiverton was unhindered by strikes, although there was little extra-curricular activity in school. The staff, he says, were committed to the pay dispute, but also to the pupils, and few made negative comments on his choice of career.

"I feel quite optimistic about it. I have to, or I wouldn't be going into it. I like the idea of having contact with pupils, and teaching them something that means a lot to me."

Obviously, I hope things will improve, but I'm realistic enough to know that this won't happen dramatically or overnight. But it really would be depressing for teaching if the people going into the profession felt demoralized and depressed about it."

Roz Jarvis

Roz Jarvis, 22, is a BED student like other science and maths students. She has found it relatively easy to get a job. She has been appointed to a post at a Cambridge community college and is optimistic about enjoying it.

She has come across little evidence of demoralization in the profession and says the maths teachers she worked with have been keen.

"I've had some teachers say to me: 'You must be mad to go into this now'. But in my view, money isn't what it's all about. In fact my experience of teaching practice was very favourable. I was at Exmouth School, which is the biggest comprehensive in the country, and I was very impressed by how well organized it was. Some of my friends had negative experiences."

"I know some people have a bad image of schools and teachers. I've since schools had to publish results, parents often think they know more about it than they do."

"On the other hand, I know people who really respect the job, because they think it's far harder work than they could do. It goes both ways."

Caroline Brown

Caroline Brown, a 24-year-old post-graduate student, has a temporary contract to teach French in Weymouth next year.

She opted for teaching after taking a year off following her degree course at St Andrew's University. "It seemed to be something where I'd be able to do more say in what I was doing and where I'd have contact with people."

She says that ever since she made her decision, teachers have been saying: "Why the hell do you want to do that?"

"Had I been a bloke, I probably wouldn't have done it. That's a sexist thing to say, I know, and I'm a feminist, but that's how it is."

She says she will "give it a try" despite low pay and morale, but she might consider a related field such as teaching in further education or English as a foreign language.

"I've got friends who left university at the same time as me – one went into magazine journalism. They've been promoted, and there's a comparison between what I'm doing and what they're doing. One went into foreign holidays, except for going to France. Or mortgages."



Caroline Brown

Softly, softly on moves to span religious divide

by James Meikle

Schools in Northern Ireland are making a cautious start on initiatives to foster links across the religious divide. Experiments include new approaches to teaching geography, history, science, and that bone of contention, Irish Christianity.

But a circumspect approach is needed in a society where the vast majority of Protestant children go to what is, in effect, a Protestant school and most Catholics go to a Catholic school.

Neither large-scale integration nor a significant ecumenical drive is on the educational agenda in a highly sensitive area where authorities cannot afford to alienate parents or the politicians.

Yet the churches have played an important part in the painstaking development of the Religion in Ireland project, now being used by a number of secondary schools governed by the different beliefs.

Discussion ranges from different forms of worship to wider issues such as mixed marriages, family planning and divorce. Schoolchildren are encouraged to consider not only similarities and differences between Protestants and Catholics but compare their divided society with that of Palestine at the time of Jesus.

Dr John Greer and Dr Eugene McElhinney, of the University of Ulster, wrote the texts used. The initiative, they said, was not a cuckoo in the nest, an alternative to existing religious teaching, but an attempt to share rather than usurp.

Guidelines for primary schools on health and social education issued by the Northern Ireland Council for Educational Research remind teachers that they should use different cultures, religions, and social groups – "opposing teams, urban/rural, Protestant/Roman Catholic, Third World, unemployment."

Peace education and a concept of justice have an added significance.

The history guidelines encourage giving the subject more prominence in the primary curriculum. "An understanding of why the present situation has arisen in our province and an understanding of the views and beliefs held by differing sections of the community may only come about if some attempt is made to examine the evidence available."

Pupils must learn that historical interpretations are in a state of constant revision.

Schools are invited to consider whether national history means Ulster history, Irish history, British history, part of European history, or a combination of all.

A handful of primary and secondary schools in the two main religious systems is taking part in Education for Mutual Understanding.

The primary scheme is still in the early planning stage but six secondary schools in Greater Belfast and the western part of Northern Ireland are involved in joint approaches to geography, history and the environmental sciences. The emphasis is on "contact through the curriculum."

One of the EMU's key figures, who asked not to be identified, said: "There could be nothing worse than to bring two sets of children together and say: 'Like each other'. They would have nothing to say to each other after 10 minutes. It would be a recipe for disaster."

This September sees the start of another experiment – the "European Studies (Ireland and Great Britain) Project" – in which six secondary schools in Northern Ireland, six in the Irish Republic and six in the rest of Great Britain, will work together on geography and history, through electronic mailing, face-to-face group meetings and field trips.

What are the prospects that education will help heal the divisions? In 1981, John Greer and a team of helpers conducted a survey of more than 2,100 Protestants and Catholics aged 12-16 to test their attitudes to religion and "the other side." Overall, there seemed an encouraging attitude of tolerance, although the Catholics



were more open than the Protestants.

Dr Greer notes this could be a sign of hope, an indication that young people are able to break out of narrow sectarian patterns of behaviour. But there is little evidence to detail what happens when these teenagers enter an adult world of scarce employment and economic hardship.

John Greer and Eugene McElhinney ended their guide for teachers on Irish Christianity as follows: "One of the things which haunts us is the fear that the problem may be too difficult to solve, and that violence, political uncertainty and human suffering will continue for future generations."

Lagan College seeks permanent home Integrated school in £3/4m appeal

A school which broke the mould of religious segregation in Northern Ireland has launched an appeal for money to secure its future.

Lagan College, the first school in the province to be deliberately integrated, all-ability and co-educational, needs £5 million to establish a permanent home in a National Trust-owned mansion on the outskirts of East Belfast. It has already been granted a 99-year lease on the site.

Grant aid from the Government will provide 85 per cent of the money needed, but the school, set up by the All Children Together charity, has itself to find £750,000 before the Government will release its share.

The school has warned that unless it can raise the cash, there is a danger that its initiative could founder and set back hopes for integrated schools in Northern Ireland for a century.

The school, which started up in a scout hut with 28 pupils and two teachers in 1981, and will have 450 pupils by September, has to move from its current home in a disused primary school, and temporary cabins in two years' time.

Launching the appeal, the headmistress, Mrs Sheila Greenfield, said her pupils were "living proof of the courage of those families who, sickened by bigotry and political stalemate", decided they could, and would, get together to live in peace and harmony.

She said that every day in Ulster the money spent on security and the Armed Forces could build a completely new school for Lagan College.

"Is it not time to invest some of this money in our young people, in their future, in reconciliation, in progress and hope?" she said.

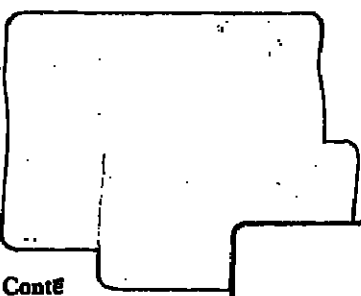
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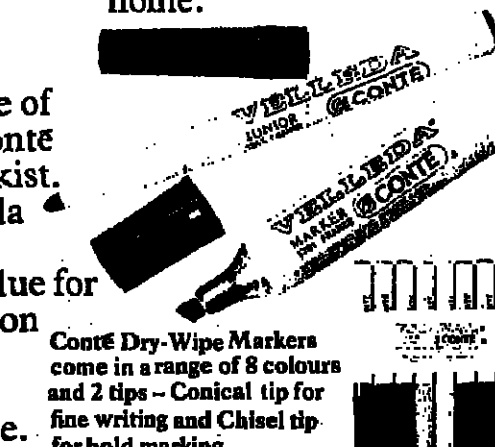
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NEWS

More Cambridge schools to take control of budgets

by Barry Huggill

Cambridgeshire schools that were given control of their budgets have proved more efficient managers than the local authority.

Over a four-year period, they kept within their budgets and several made substantial savings which they spent on books, equipment and extra teachers, according to the scheme's external assessor.

As a result, the local authority is now planning to extend the scheme and by next year all secondary schools will manage their own finances, as eventually will the primaries.

Details of the project are discussed by its external assessor, Mr Tyrrell Burgess, who is reader in the philosophy of social institutions at North East



Tyrrell Burgess: useful savings

London Polytechnic, in an article in this month's *Public Money*.

He claims that all of the schools involved in the pilot - six secondaries and one primary - found that by being allowed to assume financial control they could manage the central, educational business of the school better.

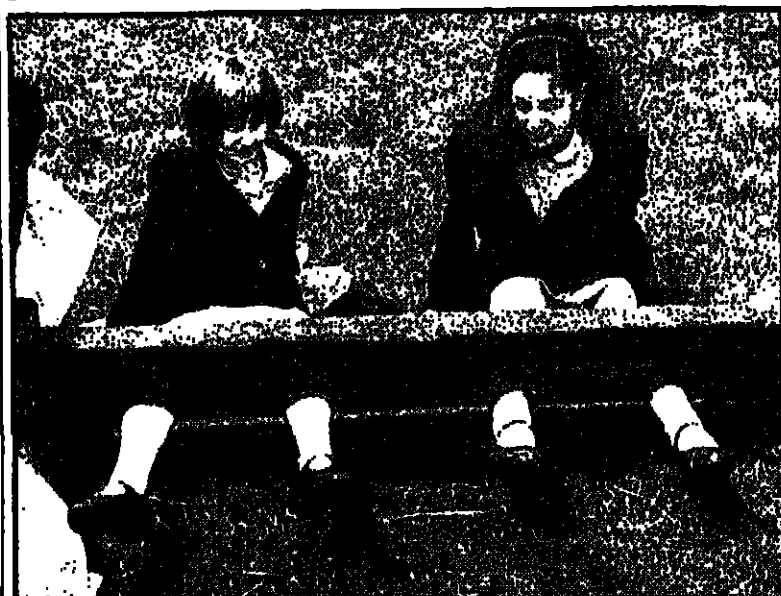
Local people were initially worried that heads would become "book-keepers", he says. But "the reverse is what has happened. All the heads have found themselves able to make financial decisions which serve their educational objects; they have become better educational managers because of their management of finance."

The scheme inevitably involved extra work but most fell not on heads but rather on local authority officers who had to liaise much more closely with schools.

Education ministers will consider that the success of the scheme lends strong support to their policy to delegate more financial management to individual schools.

A clause in the Education Bill now going through Parliament requires local authorities to give governing bodies money each year to be spent at their discretion on books, equipment, stationery and any other items.

Public Money is published quarterly by the Chartered Institute for Public Finance and Accountancy, 3 Robert Street, London WC2N 6BH, annual subscription £65, each issue £25.



Taking stocks: two pupils from Norland Place school in Holland Park, London, sample punishment the Norman way on a day trip to Mountfitchet castle in Essex. A reconstruction of the motte and bailey original on the site, razed in 1215 because its residents supported Magna Carta, has been made following 10 years' research and two years of building work.

Breakdown at pay talks

Talks on chief education officers' pay broke down last week when local authority employers conceded there were "major problems to resolve", but did not make a formal offer.

The officers have lodged a seven-point pay claim which does not specify a figure, but includes demands for a start towards a 30 per cent salary rise to give them comparability with the private sector, performance-related salary, and bigger cars.

A spokesman for FUMPO, the Federated Union of Managerial and Professional Officers, said it was disappointed at the lack of a response and was in an "angry mood". The two sides will meet again on July 14.

Rejection of unlawful ballot claim

A High Court judge has refused to rule that the election of parent governors at a Northampton school was unlawful.

Mr Justice Mann last week dismissed an application from one of the defeated candidates, Mr Raymond Gray, that the election at Spence School be declared invalid.

He said he could not rule on ballot arrangements and told Mr Gray he should have taken his complaint to the Education Secretary.

Mr Gray had complained that the ballot was not secret because Northamptonshire County Council had insisted that parents sign the ballot papers.

He also alleged that only one ballot paper had been sent to each household with children at the school instead of one for each parent.

After the hearing Mr Gray said that he was considering an appeal and that he would be presenting his case to the Secretary of State.

Northamptonshire, i.e., has changed its ballot procedure after consultation with the DES. Mr Michael Henley, county education officer, stressed that this was done before the court case.

The Education Bill, now passing through the House of Commons, stipulates that each parent should have a vote in elections for parent governors and that all elections should be by secret ballot. And the Government is preparing another clause requiring local authorities to grant postal votes to parents unable to vote in person.

Letting People Know: local government publicity after the Local Government Act 1986 by H F Rawlings and C J Willmore, available from the AMA, 35 Great Smith Street, London SW1P 3BJ price £9.50 including postage.

In brief

Guidance study

A study aimed at finding ways of improving the educational guidance service for adults has been set up. Manpower Services Commission's six-month contract has been given to the Unit for the Development of Continuing Education and the Institute of Adult and Continuing Education.

ILEA surgeries

Parents, pupils, teachers and non-teaching staff will be able to attend education "surgeries" for the first time in the London borough of Greenwich. Four new members of Inner London Education Authority have announced fortnightly educational advice sessions for members of the public on Friday evenings and on day mornings.

Appraisal benefit

Systematic staff appraisal in education would benefit teachers, the universities and polytechnics which they teach, Mr George Hill, education junior minister, told a conference of polytechnic staff last week.

The main type of appraisal carried out by the subject's immediate superior, he said.

Girls admitted

The boys' boarding school, Old College in Bristol, is to open its doors to girls from September. The school is investing £750,000 in new facilities.

Barnardo contest

Champion children are being asked to enter this year's Barnardo's competition, sponsored by a leading chain. Awards will be given in categories of art, drama, poetry, sport, and "triumph over adversity". Nominations should be sent to Barnardo's, Turners Lane, Barking, Essex by July 12.

Governors guide

A summary of the latest Government proposals on the composition and functions of school governing bodies is to be found in the new edition of the *School Governors Handbook and Training Guide*, published by Kogan Page at £5.95.

Safety video

A road safety video made by the BBC is being distributed to schools. The film is designed to alert 9 to 11-year-olds to the danger of road accidents.

Libraries project

Berkshire education authority is mounting a two-year scheme to develop a policy for school libraries. Berkshire Libraries for Learning project is being funded by the Library's research and development department.

Database plea

Schools are being asked to help build up the database of the National Education Resources Information Service. Material which could be included in the database includes lesson plans, class exercises, videos, leaflets, notes and wall charts. The project is led by David Taylor, director of Bedfordshire local education authority, who can be contacted on 405220.

Parents' letter

In *The TES* of May 30, it was reported that the All-England Parents' Group had written to Mrs Thatcher requesting a meeting to discuss the state of education. ALPAG has now made clear that the letter was signed by parents throughout England and Wales, not just by London parents.

MSC urges firms to spend more

by Diane Spencer

The Manpower Services Commission's management has fired another salvo in its campaign to shame employers into spending more on training - and to soften them up for legislation which could force them to do so.

The survey, reported in this month's *Department of Employment Gazette*, was commissioned jointly by the department and the Manpower Services Commission. It was carried out during the life of the one-year YTS, but the researchers say its findings are highly relevant to the way the new two-year version is likely to develop.

One startling discovery was that employers not in the YTS - a big majority in the survey sample - are more likely than not to ignore the YTS certificate and log book which the scheme's managers regard as the passports to jobs or further training for its "graduates".

About a third of the employers do not bother to look at them, and nearly as many are not even aware of the documents' existence.

Employers in the scheme, not surprisingly say the researchers, are more likely to show interest in these records when recruiting, with the log book considered the more useful. But both are treated as additional evidence, rather than conclusive proof, of candidates' attitudes and abilities.

A quarter of the 1,000 employers interviewed in the five survey areas - Motherwell, Preston, Reading, Torquay, and the east London borough of Newham - were taking part in the scheme, and nearly as many said they were in it for social reasons rather than their own advantage, with just under half the firms claiming a mixture of motives.

Forty-five per cent of the establishments told the researchers they wanted

Edited by Mark Jackson

Weaknesses in the Youth Training Scheme drew fire this week from the scheme's champions as well as its critics. James Meikle reports from the NUT education conference at Stoke Rochford

Get in and criticize, unions told

Unions are being urged to take a more active role in the Youth Training Scheme by a pressure group which is among its strongest critics.

Dr Dan Finn, director of the Unemployment Unit, a research and lobby group based in London and Coventry, told the National Union of Teachers' education conference at Stoke Rochford this week that lack of real participation in some parts of the union movement was weakening grassroots action over YTS.

He suggested that a critical attitude was better than going along with YTS "hook, line and sinker" or boycotting it.

Dr Finn recognized the TUC lacked real power within the Manpower Services Commission, although the unions had argued for a central training and manpower authority. "A commitment which was born in the period of social contract has a very different reality in the period of the 1980s when we now have a monster on our hands, quite frankly."

He was answering questions after delivering a speech in which he attacked the philosophy behind the YTS and its wide variation in provision. He said the Thatcher Government had embarked on an ambitious attempt to remake the skills and attitudes of the British working class, aiming for a generation of workers who are "compliant, adaptable, non-unionized and are grateful for any job whatever the conditions".

He said there was a gap between the image of YTS, including advertisements to promote it and what it delivered. "You would have thought we were entering a new golden age for the young, working class rather than witnessing the worst social and economic prospects they have confronted since the war." Lack of enthusiasm for YTS did not derive from irresponsibility or idle fearlessness among young people, Dr Finn said.

About a third of people leaving YTS at the end of their training were going to the United States.

"We uniquely in this country have allowed people to leave the education system at 16 and go into jobs without

Employers admit trainees take jobs of older workers



New for old... a result of the YTS

One in 12 Youth Training Scheme trainees is taking a job away from an older worker, suggests a Government survey on the effect of the scheme on employers. Nearly a third of the employers questioned say the scheme has brought down their labour costs.

The survey, reported in this month's *Department of Employment Gazette*, was commissioned jointly by the department and the Manpower Services Commission. It was carried out during the life of the one-year YTS, but the researchers say its findings are highly relevant to the way the new two-year version is likely to develop.

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Forty-five per cent of the establishments told the researchers they wanted

to do something to help young people, with only one in 10 firms mentioning the need to train workers for its own sector of industry.

Forty-two per cent saw the scheme's use as a way to spot and try out good future employees as the main advantage to them but a third - predominantly the smaller employers - mentioned the saving on their labour costs from the work they got out of the trainees. Nine per cent said the scheme was helping their training budget.

More than half the firms said the scheme was living up to their expectations with the rest split equally between the disappointed and those who found it turned out better than anticipated.

The most common cause of disappointment was the poor quality and attitudes of trainees, alleged by about one in five of the firms.

Some big employers were displeased by not getting as many trainees as they had hoped, and tended to resent the paperwork and alleged interference

from the Manpower Services Commission and careers service offices.

Among the three-quarters who had not joined the scheme at the time of the survey - October 1984 to February 1985 - the most common reason given was the lack of suitable work or that the firms were too small to provide training. Sixteen per cent feared it would involve extra supervision costs.

Only four per cent of the employers mentioned union opposition as a reason for their not participating, although one in 10 of the firms who had thought of becoming managing agents dropped the idea because of union hostility. Among the firms in the scheme, half had consulted their unions and a few had to overcome or disregard their opposition.

The researchers say: "In practice, it appears the opposition of trade unions is not a major factor in preventing employers' participation." But the survey itself may encourage unions to take a tougher attitude in future because it appears to confirm some of their fears that the YTS is being used as a form of cheap labour at the expense of adult jobs.

The local authorities have noted its findings that a significant proportion of employers are saving money by taking trainees and only a few say they have found off-the-job-training costs more than they expected.

The authorities are likely to use the information in a new approach to the MSC and the Confederation of British Industry to fix a national level of fees which will enable colleges providing the training to charge employers the full cost.

How the Youth Training Scheme helps employers, by Mari Sako and Ronald Dore, the Technical Change Centre, in the June issue of *Employment Gazette*.

Support of poll rule likely

by Mike Durham

No changes in the right of teachers to stand for election in neighbouring authorities, or in the status of co-opted members on education committees, are likely to be recommended in the report of the Widdicombe committee, expected next week.

But the roles and functions of education committees and local authority chief officers could be further clarified by the document.

The Widdicombe committee, set up a year ago to inquire into local government ethics, completed its final report last month. It is now being studied by ministers.

Its main recommendations are believed to concern the practice of senior

council employees standing for election as councillors in neighbouring authorities. The alleged conflict of interests was one of the main reasons for setting up the inquiry.

But subsidiary issues have included the independent status of education committees, alleged to be under attack by the composition of governing bodies; and the rights of co-opted members.

Local authorities reacted with caution this week to suggestions that the report could call for a reduction in the powers of co-opted members, which has recently become a point of friction in some hung councils.

The Widdicombe committee has

already published interim recommendations for a ban on political advertising by local authorities, which have since been enshrined in the Local Government Act.

The new legislation on local government publicity has created "considerable uncertainty" for local authorities, according to a new book commissioned by the Association of Metropolitan Authorities.

Letting People Know: local government publicity after the Local Government Act 1986 by H F Rawlings and C J Willmore, available from the AMA, 35 Great Smith Street, London SW1P 3BJ price £9.50 including postage.

Labs a male bastion

Twice as many boys as girls in Northern Ireland study science subjects at A level, and girls of lesser sixth-form ability or from manual backgrounds are more likely than others to opt for languages or mixed arts courses.

A survey among 1,436 pupils during the first year of their A level course at 21 grammar schools also found that girls do significantly more homework than boys.

Interviews by Dr Alex A McEwen and Dr Carol Curry of Queen's University education department also showed boys' and girls' sparetime interests distinctly different - with girls generally favouring debates, drama, music, choir and discos. But girl scientists had pastimes similar to the boys, who went in for team and computer games.

Boys rated themselves attractive, intelligent, dominant, popular, unsociable and lazy. They esteemed themselves as mathematicians and expected to be successful in their careers. Girls taking art courses, by contrast, saw themselves as excitable, imaginative, lacking in self-confidence, easily offended and bookworms. They were equally as ambitious as the boys.

Parents back acting head

Governors of the Castle secondary school in Thornbury, near Bristol, have refused to appoint a new head from a shortlist which did not include the acting head.

Their decision followed protests from the school's parent-teacher association and individual parents that Mr Adrian Verwoert, acting head since September, was not selected by an Avon education authority panel for interview by the governors.

The PTA told Avon's director of education, Mr Peter Coleman, that they had been very impressed by the way in which Mr Verwoert, deputy head for five years, had been running the school.

The PTA chairman, Mr Brian Stringer, said they were not suggesting he should automatically get the job but felt he should have been given a chance.

After interviewing candidates, the 18 governors voted not to make an appointment.

An Avon spokesman said that a full report would be made to the education committee at their meeting on June 24. Meanwhile, Mr Verwoert will continue as acting head.

Out-of-hours playschemes ignored by most l.e.a.s

by Julia Hagedorn

Most local education authorities spend little if anything on out-of-school playschemes for children. Of 88 l.e.a.s replying to a survey carried out at the Thomas Coram research unit in London, 75 per cent paid nothing for any kind of provision and only three authorities spent more than £51,000.

The record of spending by the social services departments was only slightly better, with 61 per cent of the 90 who replied spending nothing.

The survey, carried out through interviews with 379 London children aged seven to 11 and their parents, found that 39 per cent of the 11-year-olds and 16 per cent of the seven-year-olds were left alone for an average of four days during half-term and 10 during the summer holidays. Most of the children were left for between three and four hours a day.

Working mothers made complex arrangements for looking after their children. Some 58 per cent made four or more different arrangements in the school holidays.



After School and In The Holidays: The Responsibility for Looking After School Children. Pat Perle and Penny Logan, £2, Thomas Coram Research Unit, 41 Brunswick Square, London WC1N 1AZ.

Even when there was provision, the survey found that for many children playschemes had no part in their lives. Only one-third of the "latchkey" children in the survey had been to a playscheme at some time in the holidays.

After School and In The Holidays: The Responsibility for Looking After School Children. Pat Perle and Penny Logan, £2, Thomas Coram Research Unit, 41 Brunswick Square, London WC1N 1AZ.

Ex-MSC head attacks low-grade training



John Cassels

A top civil servant and leading manpower expert denounced provision "at the bottom end" of the Youth Training Scheme.

Mr John Cassels, director-general of the National Economic Development Office - who helped plan the scheme when he was director of the Manpower Services Commission - said the country could not tolerate poor facilities in a national scheme that had serious educational aims.

He told the conference: "At the top end there are some wonderful things being done and at the bottom end they are still dealing with emergency provision where the Manpower Services Commission was forced to accept what was going on."

Standards should be uniformly high, he said, in answering a teacher who praised the training content of some schemes but questioned the value of others by asking what for instance, could be gained by a young person spending two years in a village dry cleaning shop.

Mr Cassels had earlier compared education and training in Britain unfavourably with that in other countries, including Germany, Japan and the United States.

"We uniquely in this country have allowed people to leave the education system at 16 and go into jobs without

requiring any training at all. That is something which has died out in most of the leading countries of the world."

Some of his audience accused Mr Cassels of placing too much emphasis on training young people to compete for the jobs of people in other countries - typified, said one speaker, by the "here comes Spiky Daddies, a threat to Japan's type of advertisement, to

Mr Cassels argued back that people must either accept competition or move to protectionism which could bring poor products and a lower standard of living in conventional terms.

Investment in brain power offered the best prospects for proper jobs and a decent health and education service. "It is a failure of imagination and a failure of confidence that we have never invested what we need to invest in people at work," he said.

The man responsible for "selling" YTS has admitted that the Manpower Services Commission had to rush in the two-year version before it wanted to because of a decision by the Government.

Mr Brian Swindell, of the MSC's youth training directorate, told the conference: "The MSC, if left to its own devices, would not have mounted two year YTS until we got all this set up and running," he said.

The Government had insisted the scheme get started in April and improvements were to be brought in along the way.

He had earlier described ways in which the MSC was trying to counter criticisms about lack of training in YTS and its use by some employers for cheap labour in a dead end job or in filling supermarket shelves, sweeping up or making tea.

PEP

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The Silent Witness	42 mins. Age range: 14+	£14.95
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Anti-Arab attitudes are common among the young

Youngsters keep to the Right

ISRAEL

Support for Rabbi Meir Kahane's extremist Kach Movement among Israel's Jewish youth has somewhat declined while support for the Labour Party has moderately increased in the past year, according to a survey conducted last March.

But the country's youth remains fairly solidly right-wing in approach, and most youngsters reject full equality of rights for the country's Arabs.

The steady drift rightwards of Israel's youth during the past few years has rung alarm bells among political commentators and they have now breathed a small sigh of relief. Especially worrying was the steady growth in popularity among Israeli youngsters of support for Kahane, who openly advocates racist positions towards Israel's Arab community and occasionally calls outright for their expulsion.

Some 60 per cent of youngsters questioned supported the expulsion of Israeli-Arabs if they refused to accept Israeli citizenship. Some 38 per cent opposed such expulsion.

About 56 per cent of the youth reject full equality of rights for Arabs and 49

per cent support reducing the rights Israeli Arabs now have. Thirty-three per cent responded that they were willing to cut back on democratic structures and norms to reduce the Arabs' rights. And 39 per cent said they were willing to join Jewish terrorist groups to take revenge on Arabs who hurt Jews.

The survey, conducted by the Danhat Communications Institute run by Dr Mina Tzemach, shows that some 7.5 per cent of youngsters questioned supported Kach (as compared with 11.3 per cent last year). Another 11.4 per cent supported the Tehiya Movement, another ultra-nationalist party but regarded as within the ranks of sane Zionist thinking. Tehiya last year won 13.8 per cent support.

But Labour-supporting observers remained worried by the continuing lead of the right-wing Likud bloc among the youngsters.

The results were based on questionnaires to some 6,000 Jewish youths attending non-religious secondary schools. The questionnaires were not sent to religious high schools, where, it is worth noting, support for the Right and Kahane especially, is very strong.

Benny Morris

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Europe

Officials unearth desert's oases of incompetence

SOVIET UNION

Jennifer Louis reports on a Government inquiry into illiteracy and staff shortages

A Government control commission checking the work of rural schools in one of the outlying Soviet republics has found most school leavers practically illiterate and teachers hardly qualified for their posts.

Turkmenia, one of the Soviet Union's central Asian republics, borders Iran and Afghanistan to the south. Its population of 2.9 million is only 1.1 per cent of the USSR's total.

Ninety per cent of the republic's territory is still desert, and most of the people are farmers who live in the oases. Their language is Turkmen, related to languages spoken in north China, Mongolia, Afghanistan, Iran and Turkey.

It is officially described as one of those areas which has made a gigantic leap from medieval backwardness to the heights of modern learning during the 70 years of Soviet power.

On paper, it is stated that illiteracy was eradicated in the 1930s, that over 99 per cent of the population are now literate, and that 67 per cent have had or are involved in either secondary or tertiary education. In reality, the position is not so rosy.

The members of the visiting commission inspected 56 rural schools in the country around the capital, Ashkhabad. They concentrated on the standard reached in the native Turkmen language, in Russian and in maths by children in grade B (average age 14).

Soviet schools are known to prefer oral exams, but this time written tests were held. To make things easier for everybody, the teachers setting the tests for their classes selected only primary school material. The dictation was read out syllable by syllable and some words were even spelt. All the same, only 3 per cent passed. In two schools, all the 60 pupils tested failed.

The commission members questioned the teachers to find out what had been going on. They were told that the teachers usually write the children's compositions themselves and do

the maths homework, and then in class they ask their pupils to copy everything into the exercise books.

Not all schools, however, are lucky enough to have teachers that can manage homework. A Mr Bekmuradov graduated from the Turkmen University and teaches senior maths, but when tested himself was unable to do a maths problem from the grade 4 text book designed for 10-year-olds. A Miss Kelova and a Mr Yagnurov were among a number of language teachers named whose corrections of their pupils' written work still left so many mistakes that it was impossible to give good marks.

Another discovery made by the commission was that many of these rural schools are dreadfully understaffed. Fifty young teachers who had graduated from the republic's training colleges and were appointed to schools in the Ashkhabad region last year never reported there for work at all. They chose instead to look for alternative teaching posts, or any other job.

So, for example, in one school maths is taught by the biology teacher. Other subjects are just the same. Seventeen schools in the region simply omit the compulsory foreign language from their curriculum because they have no qualified teacher. In many other schools the standard of instruction is so low that school-leavers are little better off than when they began.

These findings would have been quite enough to cause consternation in the ministry, but worse was to come. In some areas, children do not go to school at all. Some families, for instance, on a state farm in Bukharden district, live between nine and 25 miles away from the nearest school and have neither transport nor boarding facilities available. So the children of at least 15 families never got to school.

In spite of these facts, the current edition of the Turkmen Encyclopedia states that there are 1,569 schools in the republic staffed by more than 36,000 teachers. The new Soviet policy reform stipulates that the school age throughout the country should be lowered from seven to six, and the encyclopedia proudly states that some Turkmen schools are already experimenting with an intake of younger pupils. Perhaps after all they would be better off at home.

Red faces for Labour

AUSTRALIA

An anti-discrimination case involving a 15-year-old girl at a Sydney school has caused panic among the state's bureaucrats and politicians.

The case (TES, February 28) involves Melinda Loves who has complained that the education department has discriminated against her because she cannot pick as many subjects as her twin brother Rhys, who attends a boys' secondary school nearby.

While he can choose to follow computer studies, graphics and technicals, for example, she can only take up "traditionally female subjects" such as needlework and cooking.

So her family (with the support of women's groups) decided to take her case to the equal opportunity tribunal which has been hearing evidence from the parties involved for the past four months.

It now appears that the tribunal will find in favour of Melinda and possibly order that all schools offer pupils the same range of subjects, a prospect that is seriously worrying the Government.

At present, all schools in New South Wales must offer students in years 7-10 a core curriculum of mathematics, English, science and social sciences. They must also offer a number of elective subjects, which include computer studies, music and industrial arts.

But not all schools are able to offer the same range of electives. This depends on factors including the num-

ber of students wanting to study a particular subject, and whether the school has adequate resources.

If Melinda were to win her case, as seems likely, then the department would have to alter this policy. According to a confidential document prepared by the Government, this would cost at least \$A1,500 million (£700 million) a year to implement.

The document, which was leaked to a Sydney newspaper, said: "If Loves wins the case, the Government would ultimately be required to change the organization of state education, so that every school, whether single sex or co-educational, had identical offering of facilities."

It also recommended that the anti-discrimination legislation (believed to be the most comprehensive and radical in Australia) be amended to stop any similar cases in future.

One of the changes proposed would have the effect of handing responsibility for the discrimination in the curriculum from the Minister for Education to individual school principals.

The leak has embarrassed senior bureaucrats in the department, the minister Rodney Cavalier, and his Labour Party colleagues. The Government has had its anti-discrimination image seriously tarnished.

Luis Garcia

Teachers on uniform pay with constables

NEW ZEALAND

Llyn Richards assesses the long-awaited salary review

The purveyors of justice have long been valued in society as public figures, more respected than most but inferior to accountants.

The background is that teachers struck for a new pay scale they hoped would help to fill gaps and create a more attractive structure.

Both the Government and teachers agreed to go before arbitration court. The teachers, than they asked for but more the Government had offered. Some 50 per cent of secondary teachers will get a 3.5 per cent rise, bringing pay to \$34,150 (approximately £11,000).

This bracket is a teacher with 15 years' experience in the same league as a police constable of 15 years' service. The constable has 15 shifts, but he need not have a wife and he has been better paid than teacher every year before.

The teacher and the constable at this point 40 per cent better off than an accountant.

The secondary teachers' union asked for increases at the "points" in the scale at the place where experienced teachers are located.

This restructuring they were granted in full but, following a creeping trend in New Zealand, richer got richer (35 per cent for principals) and the poorer poorer (23 per cent for new teachers).

Teachers have already had a 15 per cent rise in 1985 and a 10 per cent rise in 1986. With back pay granted in November and the payout not until July, most secondary teachers have \$3,000 extra in one lump. This is third in tax and that is a nice contribution towards a mortgage or home computer.

It has still to be seen how the scales will affect the 400 teachers in the county's secondary schools.

Principals have been busy making moves such as abolishing numbers, merging classes, cutting down subjects or restructuring using retired teachers, who are paid periods that teachers can't pay.

Teachers are to be asked to ask teachers to cover classes themselves, and asking the correspondence school to provide work (and marking) by post.



The spectre of privatization is looming over teachers in America's public schools. So far the threat has been confined to ancillary services - canteen workers, caretakers and the school bus services - but one sentence in the much-lauded Carnegie report on teaching as a profession has sent a shiver down spines in the classroom.

It says: "Market methods could produce incentives for improved performance and productivity" and suggests that schools should experiment along these lines.

The teachers have already observed from the sidelines what "market methods" have meant for their non-teaching colleagues. Budget-conscious school boards across the country have been firing their unionized ancillary workers and contracting out the work to private firms who employ non-union labour for minimum wages.

For the boards, privatization means lower costs, fewer administrative headaches, and no hassles with unions. For the workers, the number of jobs has been cut, sometimes by more than 50 per cent, and those that are available are less well paid.

With the union movement in America fragmented and frequently ill-

Private fears in the public sector

UNITED STATES

Bill Norris on concern that market forces may be introduced in the classroom

organized, it has often been left to the biggest teaching union, the National Education Association, to fight on the ancillary workers' behalf.

"We felt it was not only the moral thing to do. It was also in our self-interest. If they can contract out classified jobs today, they can start on counsellors, coaches, and other certificated jobs tomorrow."

The NEA's fear is reinforced by the Carnegie report, which suggests that groups of certified teachers should go into business for themselves and contract with schools for their services. Such groups would take responsibility for anything from an individual course to an entire area of the curriculum.

In one state, Minnesota, a plan to reorganize public education along these lines has already surfaced. The

proposal is that "common high schools", covering teaching grades seven to 10, should be allowed to contract out for the teaching of everything but communication, social studies, mathematics and science. Older students, in grades 11 and 12, would be given vouchers to use at any public or private school.

For teachers who lose their jobs under this scheme, the Minnesota plan suggests an "entrepreneurial development fund" which would guarantee loans to displaced teachers for setting up educational service companies.

The proposal, which was produced



Will teachers be the next group in schools facing cuts?

by consultants acting for a group of prominent Minnesota businessmen, has yet to pass the state legislature. It is being strongly opposed by the Minnesota Education Association, which objects to the idea that teachers should compete for contracts in the same way that doctors compete for patients or lawyers for clients.

The NEA president, Marti Zins, said: "People who are working for a profit will never look at the whole child. They'll focus on their own part, ignoring the rest, and teachers will lose all sense of collegiality if they have different employers."

Another aspect of the Carnegie report regarded with some scepticism by the NEA - the creation of a national board for teaching standards - is also being pushed ahead. Professor Lee Shulman, head of the education policy institute at Stanford University, which has been given an \$817,000 grant to develop new forms of assessment, has already released a preliminary report.

Professor Shulman is recommending a new battery of tests that would not only reveal teachers' understanding of basic skills, such as reading, mathematics and writing, but would also show how teachers perform in

class, how they plan their day, and how they relate to students with varying social and economic backgrounds.

The new examinations, which would be voluntary, would be very different from current American teacher tests which concentrate on multiple-choice questions.

As an example, professor Shulman cites the hurdles that would face a budding biology teacher. The graduate would be asked to give a critique of the way two different textbooks treat photosynthesis, and would have to develop a lesson plan based on each one.

After using the textbooks to tell the students how he or she would teach students with varying religious, cultural and ethnic backgrounds, the candidate would then present the lessons before a board composed mainly of teachers.

Passing this test, which would follow a period of probation in a school, would qualify the teacher to be certified at the second of four salary levels proposed by the Carnegie task force. But the NEA is suspicious of the whole idea of national certification, and wants teacher testing to remain in the hands of individual states.

Beat drugs or lose cash, Bennett warns

The United States Education Secretary, William Bennett, wants to withhold Federal funds from schools and universities that are not doing enough to rid themselves of drugs in the classroom.

"We need to get tough," he told a congressional committee last week. "We need to get tough as hell, and we need to do it now."

Educational reforms, said Mr Bennett, including higher academic standards and teacher salaries, were useless "if our kids are committing brain suicide with drugs."

A recent survey had shown that last year 61 per cent of all high school seniors - about two million students - had tried an illicit drug. Forty-one per cent had used drugs other than marijuana, and 46 per cent of heavy drug users had admitted using marijuana in school.

It was, he said, the most grave educational problem. "When a child cannot read at age eight, he can, with effort, be taught at nine. When a child cannot multiply or divide in the sixth grade, he can be taught in the seventh. But when a child ruins his mind with drugs, he may not be able to start again. He may become a casualty."

School officials, Mr Bennett added, should not hesitate to bring in the police and "act like police themselves" when dealing with drug-using students. He acknowledged that posting security

guards in schools, expelling students and notifying parents would not be pleasant - "but where there are drugs, for the sake of the children, these things must be done."

Congress, he said, should consider that "this Secretary of Education, in consultation with whoever you want, has authority to withhold Federal funds from any school or school district or college or university that does not have a serious commitment to ridding its school of drugs. His department had been 'deeply frustrated' in distributing billions of dollars in Federal grants and loans to schools where student drug use undermined academic programmes."

If Mr Bennett expected an enthusiastic response from the House Select Committee on narcotics abuse and control, he was doomed to disappointment. Instead, they accused him of failing to educate American schoolchildren on the dangers of drug use.

The committee pointed out that of the department's \$18 billion school aid budget, only \$3 million was spent on drug and alcohol education and prevention.

The committee reported: "It is clear that the Federal government has abdicated its leadership responsibility and is not doing its fair share in support of the area of drug education and prevention."

Year-round calendar may end long summer vac

The long summer holiday for American schools, which traditionally begins in June and ends in September, may be on its way out. Faced with overcrowding, absenteeism, poor student achievement, and teacher burn-out, an increasing number of schools are discovering that one simple change can provide a pause: the year-round calendar.

Instead of a nine-month slog, followed by three months of inertia, these schools are experimenting with various schemes which provide short terms and scattered vacations. The most popular, known as the 45-15+ plan, one in which students spend 45 days

in class followed by a 15-day holiday.

They are split into four groups, with no more than three groups in school at any one time. This provides the added benefit that the school can absorb one-third more pupils than it could under a traditional nine-month single track calendar.

Other schools are switching to three terms, each of three months, with a month's break in between. The results in both cases are claimed to be excellent, with higher class attendances, better learning retention, and fewer cases of burnt-out teachers.

The knowledge that a vacation is never far away seems to have worked wonders all round. Staff morale has been improved, and areas which have tried the experiment find that capital expenditure on new schools has also been reduced.

The National Council on Year-Round Education estimates that the change has so far been implemented by some 300 schools with 200,000 students. But the movement is having to overcome a strong attachment to long summer vacations, particularly among parents, who see year-round education as a blow to family holidays.

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Dominant French predictable but not in national interest

Sir - Yet again central government, in the form of the DES, has expressed its concern that "the dominance of French over other languages has to be ended" (TES, May 30). Modern language teachers will welcome this news, but with a circled cheer rather than exultation: this determination has been voiced so many times before, and has been followed by no decisive action.

Much of the blame for the decline of languages other than French in our schools has to be laid at the Government's door: small groups of pupils studying so-called "minority languages" have been deemed to be non-viable in these days of financial stringency and have been steadily killed off. If the new initiative on the part of the DES involves an injection of cash to reverse this trend, two cheers may be in order.

Unfortunately, however, any recommendations are likely to be ignored, as they have been in the past, unless they are given the force of law. Curricular decisions are made not at Elizabeth House, nor even usually at county headquarters, but in head-

teachers' studies and at governors' meetings.

Any DES recommendation without adequate teeth will have to overcome: the widespread belief on the part of the general public that French (and not German or Italian, for example), is an essential ingredient of a complete education;

The apparent conviction of most headteachers that every school has to provide ubiquitous French in order to ease the transfer of pupils who move areas;

Public prejudice against other languages, expressed in Nazi salutes behind German teachers' backs and the imputation of left-wing sympathies to teachers and students of Russian.

Language teachers have always known that the current self-perpetuating dominance of French, which is not of their making, was inimical to the national interest. If the Government has seen the light, let it do two things: govern, and put its money where its mouth is.

MICHAEL J SMITH
15 Golden Hind Park
Dibden Purlieu, Southampton

Eastern lesson

Sir - Barry Hugill's report of current DES disquiet on the issue of modern languages in schools (TES, May 30) is perhaps heartening. Senior DES officials are concerned about how few boys take up languages, and believe that the dominance of French "has to be ended".

The present sorry state caused one to wonder about the relationship between export performance, foreign language competence in industry, and learning languages in school.

Forgive me, but this is not even a "think", let alone a "rethink"! Are "vocabulary" and "communication skills" really merely the crass alternatives to "grammar" and "literature", which they are seen to be by the unimaginative DES?

Years ago Professor Eric Hawkins alerted linguists and teachers in the Modern Language Association and elsewhere to the imbalance between the boys and girls taking up languages. Years ago Keith Emmans' report on manpower needs in industry gave an important indication of industry's priorities for foreign languages.

Other surveys, too, made it increasingly clear that industry's demand

for German was at least equal to that for French, and in 1986 that demand is greater still. Spanish, too, and more recently Arabic, have become strong contenders. How is it that the DES is only waking up to these problems? Recent Unesco surveys provide statistics to show that Germany, with about 120,000,000 million native-speakers is the second most widely spoken language in Europe (English is last). And, as is well known, it should be taught far more widely in order to facilitate communication within Europe.

But then, the United Kingdom withdrew from Unesco, didn't it?

A pity, for otherwise the DES might have been induced to look beyond the shores of this island, to find the link between export performance, selling national products in the target language, and the learning of foreign languages in state education. The countries of Eastern Europe have learnt the lesson, too. Why can't we?

EDWARD M BATLEY
President
Fédération Internationale des Professeurs de Langues Vivantes
Penland House
Old Road, London SE13



No sex barriers

Sir - I read with interest Allen Wade's article "No barriers, please" (TES, May 16) about physical education and the causes of its decline. PE has no barrier of the sexes either 40 years ago or now.

In the 1950s, I was teaching in an all-boys' junior school - three women staff to ten men. I took over as athletics coach (the team won everything possible in the district sports) and another female teacher did extra curricula football and boxing. We all taught

football skills and did other forms of PE with our own classes. At the other end of his time-scale - the 1980s - I taught in a mixed primary school where the junior staff was again dominated by men. We all took PE and games and the only qualified football referee was a female!

I offer the following as reason for declining enthusiasm for general PE in non-sport orientated children and teachers: a great decline in street-based out of school sport (due in itself to the advance in other activities - not least television); the disappearance of the bulky-type attitude that made even the weakest child perform whether or not it was in his or her best interests; and of course to "conclude a near perfect formula for demise of (certain forms) PE" - the wanton hedonism on and off the sports pitch - dare I say it - mainly brought about by the male!

SHEILA TURNBULL
The Riddings
Brecklehampton
Peasbore
Worce

Poor sport

Sir - As one of the inhabitants of the female domain referred to by Allen Wade in his article, I would like a right of reply. He states that we women primary teachers are the reason for the decline in recent years of boys' physical education in schools.



University choice: quality guide no help

False guide

Sir - The headline "National guide to university quality" (TES, May 30) is grossly misleading both to potential undergraduates and to their sixth-form advisors.

Since the University Grants Committee rating is based solely on their assessment of research it gives no indication as to the quality of teaching in the universities. Indeed, those departments labelled as "outstanding" and "above average" may have achieved their success in attracting external funding and postgraduate work at the expense of undergraduate

teaching; moreover, many teaching departments may be "below average" by UGC standards. We now have a spurious "table" of universities based on criteria that are largely irrelevant to undergraduates. It certainly does not colour the judgement of sixth-form students for it provides a wholly inappropriate basis for choice.

A F DARNELL
Head of sixth-form
Framwellgate Moor
Comprehensive School
Newtown Drive
Durham City

Timely reminder

Sir - May I through the TES remind publishers and educational suppliers in the UK that overseas schools do need to receive copies of current catalogues in January or latest February, so that orders can be submitted to suppliers in the UK in plenty of time for delivery to be made for the opening of the new academic year in September.

This year this school is spending more than £100 per pupil on books and equipment, but all our ordering has had to be done from old catalogues. For schools such as ours, catalogues must be sent in time to ensure arrival in less than six months from the date of posting.

ALAN J ROWLAND
The British International School,
Cairo
c/o The British Embassy
Cairo, Egypt

Too late

Sir - In his epilogue on Sir Keith Joseph's time as Secretary of State for Education and Science (TES, Platform, May 30) Ted Wragg praises him for "his courage in grasping the nettle of his own examination reform" and says that I "failed to deliver".

Sir Keith, indeed, did grasp that nettle. But it is misleading for Professor Wragg to leave out the fact that the GCSE had been approved by the Government on the advice of the Waddell committee during my time of

office. It was only the election of a government that delayed its implementation.

To my mind the tragedy in this story now being delayed to the point, years later, where its relevance is longer obvious. Individual pupils' records of achievement and assessment might do the job much better.

SHIRLEY WILLIAMS
President
SDP
4 Cowley Street
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Everyday lessons

Sir - The review of *Teacher's Book A* and *Student Book A* of Longman Scienceworld (TES, April 11) has just been brought to our attention.

We were glad to read how useful, valuable and easy to read the reviewer finds the second half of the book but some of her comments about the first part of the book need correction. We must take issue with the reviewer when she describes the hand down of authority from author to teacher and from teacher to children. This is not so.

Science is an ordered discipline and children learning science are at the beginning of that process. The seven stages of Longman Scienceworld give teachers and children opportunities to get into science by exploring the common experiences of classroom, home and everyday life. But this common experience only becomes science if teachers and children question and discuss that experience.

Oral transactions are crucial and the comments and questions which teachers pose are vital in helping the children's thinking. Equally important is the resulting discussion among the children and between teacher and child. The authors do suggest what the teacher should say but they do so in order that discussion leading to scientific understanding may be initiated.

The pictures in *Student Book A* are in "Child Education-style" if that means large, bright and tough but they are not randomly decorative scenes. They provide the essential focus which makes plain to teachers and children that science activity and understanding is associated with all sorts of aspects of everyday life.

The reviewer admonishes us for suggesting that "you may be tempted to skim through the notes: this is not advisable". Perhaps this letter illustrates why we decided to include this statement but we do sympathize.

BRENDA PREST
General Editor
Longman Scienceworld

Simple STEP

Sir - The colleges of Cambridge University have decided to simplify their entrance procedures and to abolish the fourth or seventh term entrance examination papers. Those are to be replaced by STEP (Sixth Term Examination Papers), to be taken in June after the A level examinations.

At first sight this might seem an excellent idea, especially for those schools which have been unable to apply the intensive coaching needed in the autumn term for the old-style papers. However, the new system may well cause even more problems than the old one.

STEP results will be published with the A level results. All prospective Cambridge candidates choosing this mode of entry will have to hold Cambridge as their first choice in the UCCA system and after the results are published. What will happen then?

Will the clearing system be flooded with high-calibre candidates who have just fallen short of the standard necessary for Cambridge? Or will the universities who have traditionally made offers in the spring term to Oxford and Cambridge reserve some places for those who are holding them as a provisional or second choice?

How will this affect those sixth formers who are not trying for Cambridge? In recent years I have found that university departments have been even though their results may be a grade lower than those originally demanded, if the students had chosen to accept their offer firmly in the first place. Is such an attitude likely to be maintained once there is a pool of candidates rejected by Cambridge waiting to find places in August?

The scramble for university places after the results are published seems destined to become even more competitive and frenzied. I wait with interest to see how the other universities are going to play the game now that the Cambridge colleges have changed the rules.

MARION BALDOCK
Senior Sixth Form Tutor
Burgess Hill School
West Sussex

Why projects fail the bottom 40%



Sir - I was dismayed by the BBC *Panorama* programme "Who's failing the failures" and, in particular, John Clare's argument that the strategy for making the educational provision for the "bottom 40 per cent" of secondary school pupils more appropriate to their "needs" was to make the curriculum more vocationally oriented, and that alternative methods of accreditation for the "bottom 40 per cent" would motivate them and persuade them to remain in school.

There are many projects and trial schemes in this country involving vocational courses and alternative assessment/recording/profiling systems. It becomes clear to those who seriously enquire into pupils' learning and ways of recognizing achievement that many projects will fail to address these problems if they assume that:

- 1 Practical or vocationally oriented work is only appropriate for a particular ability range;
- 2 One can "bolt-on" a user-friendly record of achievement to one's present curriculum to provide motivation for the less able; and
- 3 Dividing pupils by ability into

academic or vocational areas of study will solve the problems schools face.

There are fundamental questions that need to be asked at individual, departmental, school and i.e. levels: what do we want pupils to learn and why? what teaching strategies enable them to learn to take place and, how do we know? what methods of recording the achievements of pupils can we employ that will become part of the learning process being both diagnostic and motivational, on what evidence, and by who's values?

The apparent banality of such ques-

tions belies their importance and an academic response may fail to face the practical problems of issues like accounting for the unpredictable outcomes and achievements of pupils' learning. Most importantly, we should ask these questions when considering all pupils.

Schools need to identify the best structure, use of resources and strategies that will enable them to provide a curriculum of entitlement where the needs and desires of all pupils are met. Such critical examination of purpose needs great support.

It would appear that we still readily make important either those things that are easily assessable or those things influenced and bound by our graduate training and specialist bias, and fail to truly face close scrutiny and research the notion of curriculum led assessment.

DAVID HANSON
Aesthetic, creative, physical education co-ordinator
Dorset Records of Achievement Project
Dorset County Assessment Team

Humberside plans

Sir - Hilary Wilce's report on the recent teaching training allocations (TES, May 16) stated in passing that Humberside College of Higher Education has been "on previous lists of proposed closures". This is not the case.

Indeed, in the most recent planning exercise (NAB 1985) Humberside College was awarded substantially increased intake targets through to 1989. It is also perhaps unfortunate that the

report was cast within the framework of "cuts".

What makes the current proposal much more significant, and difficult to comprehend regionally, is that it is set within a framework of planned expansion, not contraction.

G M E WILLIAMS
Head of School
Humberside College of Higher Education
Inverness Avenue
Hull

Limits of science

Sir - Low salaries in teaching are certainly one of the prime reasons for the lack of science teachers in our schools, but there are others. I am a science teacher and have been for 30 years. I do not advise anybody to contemplate a career as a science teacher, as they will be penalized from the day they begin their A level studies.

At A level they have to take an extra paper, a practical examination which if prepared for properly takes up considerable time spent in laboratories. At university they will spend their afternoons in the laboratories and evenings writing up the afternoon's experiments while their arts colleagues are developing their background knowledge (probably in the Students Union).

In their PGCE year the prospective science teacher will spend his time gathering and testing apparatus for his practical lessons. His arts colleagues, who do not have to teach practicals, do not have this to do.

We now come to teaching in schools. A shortage of science teachers means larger classes (1 teach groups of 25-30, my colleagues teaching humanities have groups of 10-15). Larger groups

equates to more marking, more reports to write, etc, namely a more difficult teaching environment.

Scientific development means that the science teacher has to keep up. I've not heard of a new Shakespeare play being written or a new continent being discovered recently but perhaps I'm devoting too much time just keeping up in science.

Again, keeping up is another extra for the scientist. Next comes the privilege of early retirement. A colleague teaching English who parallels me in age, service, salary scale and qualification applied for and was granted early retirement. At the same time, I asked for the same privilege. My request was refused because I teach science.

Thirty years ago I made the mistake of choosing to become a science teacher. My advice to any prospective teacher is that they do not repeat my mistakes. Conditions and rewards for science teachers need to be greatly improved before any prospective teachers offer themselves to teach a science subject.

DEREK STANDER
23 Beacon Down Avenue
Beacon Park
Plymouth

Translated rhymes

Sir - I was surprised that Kent was credited with producing the first book of English nursery rhymes translated into Punjabi (TES, May 2).

The work of mother tongue teachers in some Nottinghamshire schools identified the need for translations of nursery rhymes some time ago. Those teachers published translations of rhymes, not only in Punjabi, but also in Urdu and in Hindi, and they also translated rhymes from those three languages into English.

Not all English teachers can read Urdu, Hindi and Punjabi script, and so each of the volumes includes a phonetic version as well as a prose translation as many teachers will find this helpful as they teach the children the rhymes. Enquiries concerning any of those six books should be addressed to the Nottinghamshire Curriculum Development Support Centre, The Munda Centre, Green Street, The Meadows, Nottingham, NG2 2LA.

A J FOX
Director of Education
Nottinghamshire County Council

Similar trends

Sir - I would like to correct a misrepresentation in the story by your Northern Ireland correspondent, Carmel McQuaid, (TES, May 16, page 12). The story relates to a report on *Demographic Trends in NI* by Dr Paul Compton, from Queen's University.

For your guidance, I would point out that Dr Compton has made a comparison between the 1984 series of projections by the Department of Education Northern Ireland and his own latest available figures.

The Department of Education updates its statistics annually, a practice well-known to Dr Compton, and had Dr Compton used the DENI 1985 projections, published in December 1985 several months before the publication of *Demographic Trends in NI*, he would have found them to be substantially in line with his own statistics.

ROBERT BURNETT
Senior Information Officer
Department of Education
Northern Ireland

Career course

Sir - Carmel McQuaid turns out to be summarizing two very limited research studies, when concluding that "careers teachers play a negligible role in pupils' choice of profession or A level subjects" (TES, May 23).

This finding may just about hold water for the 35 women and the Irish grammar school pupils surveyed. However, a more extensive study published earlier this year by the National Consumer Council ("The Missing Links between Home and School: A Consumer View", March 1986) drew a rather different picture. Although this latter survey criticized the lack of communication that sometimes exists between schools, careers offices, parents and pupils themselves, it laid great importance on the work of both careers teachers and careers officers.

Parents certainly retain a strong role in influencing their children's choice of subjects and subsequent careers. However, they, along with their children, continue to need the information and guidance that can and should be offered by specialist practitioners. If there are inadequacies in the service provided by careers teachers this only serves to point up the need to strengthen this area of provision.

ALAN VINCENT
President
National Association of Careers and Guidance Teachers

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TALKBACK

No boarding party

MAURICE LOGAN-SALTON

Since the Conservatives came to power in 1979 there have been more than 100 closures in three different categories of educational boarding establishments.

In 1984, the Monday Club described the closures as the most tragic and unnecessary loss of a traditional form of provision since the demise of the direct grant schools.

Schools for children with special needs are often noted for having the facilities, the space and the skilled staff necessary for a constructive residential environment. Among the problems which the children could have presented in ordinary schools are truancy and disruptive behaviour in class.

On a positive note, the former Education Secretary recently rejected a local authority attempt to close Whitworth House, in County Durham, which has 82 pupils. But other schools in the same county, Dinsdale Park, Redworth Hall and West Lane (day) are still to close. Northumberland has shut Brownrigg School, while Sunderland is closing Milton Hall in Cumbria.

In England and Wales, another category of boarding school, the community home with education (CHE), has been a major resource for the residential care of children whose problematic behaviour might have included truancy and delinquency. Founded on Christian principles, and retaining the character-building outdoor activities of their former role as "approved schools", CHEs had developed into confident, experienced, therapeutic communities. This won them supporters in all political parties.

In 1979, there were just over 120 CHEs. The closure of approximately 80, since then, as local authorities have looked for "savings", has caused distress and bewilderment to large numbers of experienced teachers and pupils. The youngsters are more likely to be sent to custodial institutions, just as they were in the early 19th century before useful residential alternatives

were devised, than they are to benefit from so-called "community care" schemes which are normally appropriate for the most minor of offenders.

Scores of distinguished names in the fight against juvenile crime have been lost since 1979. They include St Benedict's at Wokefield Park, near Reading, St Camillus, near Tadcaster, Pishobury and Kneeworth House in Hertfordshire, and the National Nautical School at Portlisshead, Bristol. In the North-East and Cumbria, impressive residential facilities for girls have been lost with the closure of Benton Grange and St Hilda's, while seven CHEs with long experience in meeting the educational and other needs of boys have closed: Axwell Park, the Castle School at Stanhope, Longhurst Hall, Edmond Castle, Pelham House, St Peter's and Richmond Hill.

The Social Services Secretary is supposed to have "ministerial responsibility" for the provision of residential care, but he has not challenged the closures. Last year, when Teddy Taylor, MP, asked for details of the closures of CHEs since 1979 he was informed by a junior minister at the DHSS that the information was not available.

Recent enquiries into the state of surviving children's homes in England and Wales have described cramped, under-staffed facilities, unsuitable for the teenagers forced to reside in them. That was the inevitable outcome of the Government sitting idly back while directors of social services pursued their schemes.

Pelham House, which closed in 1984, had more than 60 boys in 1980. St Peter's had 50 boys when the Diocesan Rescue Society made arrangements to close it. The main user, Cleveland, which, incidentally, has the worst rate of juvenile crime in the country, could project a need for only 10 boys to benefit from the school at any one time. Earlier, that authority had closed the Castle School.

The closure of boarding establishments to have suffered closures since 1979 are the excellent List D schools run by the Church of Scotland, the Roman Catholic Church and the voluntary sector. Despite unanimous support from the Government, the Scottish Office staff by handing financial control over to regional councils. Closures were bound to occur because

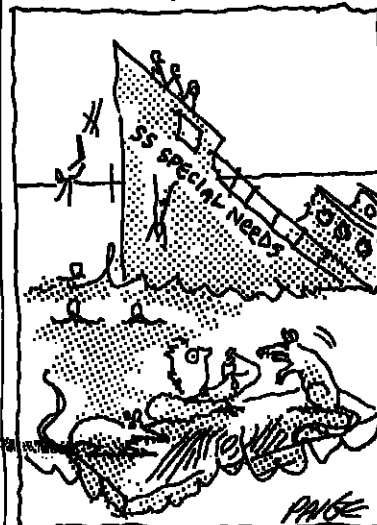
social work departments would be unlikely to preserve List Ds, out of loyalty to their superb facilities and character, during periods of under-use.

One of the most respected List D Schools was St Andrew's at Helensburgh. In January this year it had 57 teenagers and 35 members of staff. It has now closed. The present Secretary of State for Scotland was evidently unwilling to revise the damaging plans drawn up for List Ds by his predecessor.

Seven years of Conservative government have witnessed the destruction of boarding facilities which any other government would almost certainly have wished to protect. No closures took place under any Labour government.

As the news of individual closures of schools for children with special needs, CHEs and List Ds has filtered through, the feelings of those who have understood the importance of their contribution can be compared to continuous shell-shock. The speeches of the chairman of the Conservative Party about the need to preserve the best of "traditional values" are unconvincing, while, at the same time, a great school like St Andrew's is destroyed, not through any fault of its own, but because of shameful administrative expediency on the part of other Government ministers.

Maurice Logan-Salton is spokesman on juvenile crime for the Monday Club.



Planning in the dark

JOHN MACKAY

"Is it true," I was asked by a colleague recently, "that you're reducing third-year craft from three to two periods a week next year?"

I replied that it was indeed true. "Then I feel I must register my disapproval. Two periods a week just is not enough."

There was a touch of irony in this protest which I felt I had to point out to my interlocutor, who was a craft teacher. He had just been granted a year's secondment, conditional upon the school agreeing to his loss for the year counting as part of our staff reduction. In other words, we were not to be allowed to replace him if he was to be seconded.

Once the direct link between his departure and third-year craft adjustments was pointed out, he appreciated the irony. However, he was then anxious that I should undertake to restore the three periods for the following year. Whether his motive was selflessly educational or whether he simply wanted the reassurance that there would be a job to come back to and I wouldn't have eradicated craft altogether in his absence, I do not know.

Whatever his reason was, I hedged. What alternative did I have? How do I know who will apply for the granted early retirement/voluntary redundancy/secondment/voluntary redeployment for the next academic year - conditional, of course, upon non-replacement in school?

In these circumstances, part of my job is, it seems to me, to bend the school's curriculum in such a way that the teacher(s) in question may be retired or seconded. What is the alternative? It was all very well for Professor Eric Brault to describe his favoured curriculum-led strategy as "plan, redeploy, appoint", from the lofty pinnacle of education officer. He did not have to pick up the pieces of demoralized and embittered teachers who are shunned from school to school.

And in my experience, it is not merely the redeployee who is demoral-

ized; his former colleagues are glancing over their shoulders in that the knife is hovering behind them. Businesslike Braultism is not always good for business.

So we are left with CID: Curriculum-planning in the Dark. For long-term strategies; forget five-year plans. The shape of the curriculum dictated not by educational priorities but by course staff leave.

Of course, CID improves. One is to leave the early retirement forms strewn idly in the way of difficulties in Riyadh advertising the opportunities in Riyadh advertising of the recently divorced young man who's just lost his driving licence. Tactic two is to abandon principles and write excellent references for all colleagues, but particularly excellent ones for those in whose subject area the school seems to be a bit of curricular tail.

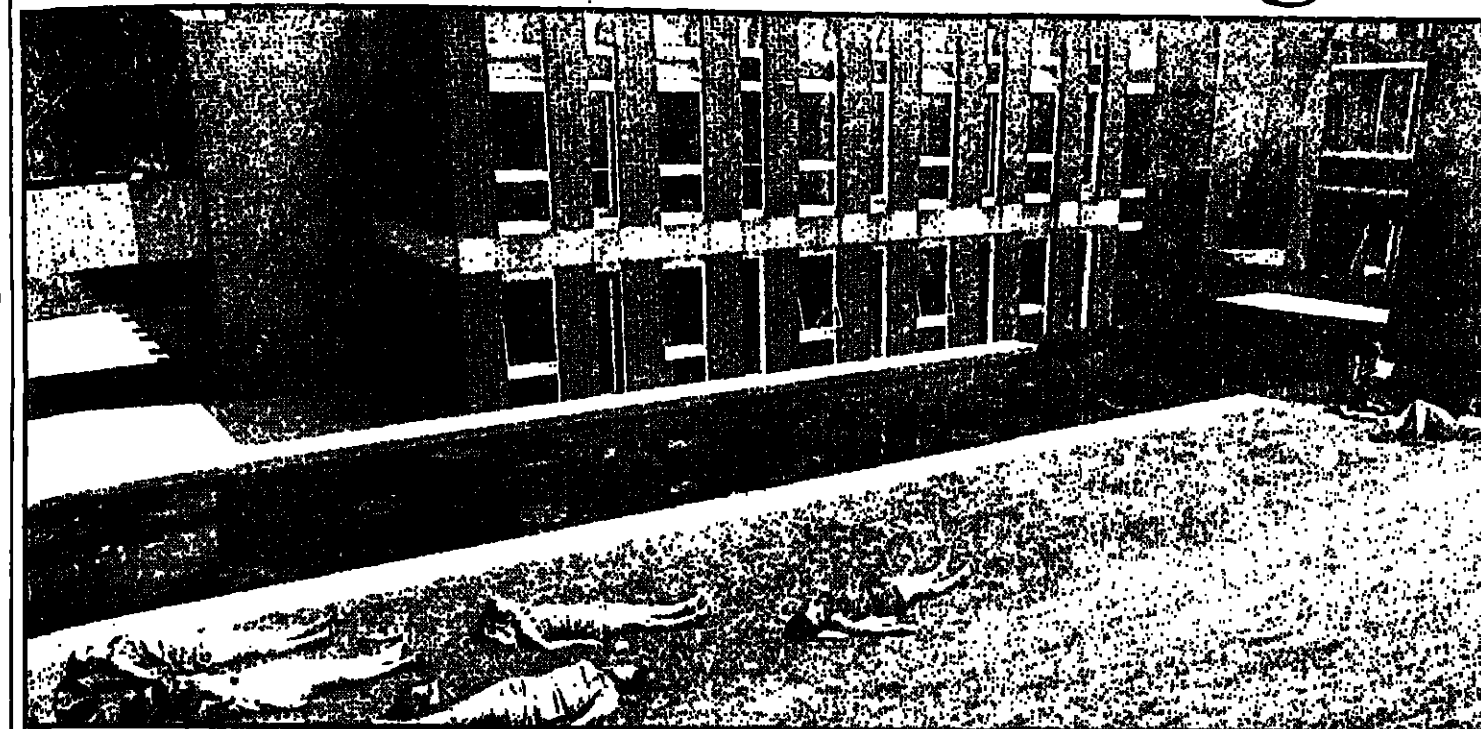
Tactic three is for use when all else fails: say "I'm sorry, you can't be seconded - we can't spare you a school" - and walk away with only available to education administrators. During the course of my year last year, I examined the process curriculum-led staffing in four education authorities. Most dealt with reductions in the hand-to-mouth fashion described above, though the degree of notice about the following year's staffing varied: one had still negotiating his staffing in September in June. Another had had involved what seemed a massive compromise between the necessary staff reductions and the desirability of long-term curriculum planning.

Schools' staff reductions were calculated year-by-year, and then cast over a five-year period, so the individual schools had greater flexibility in their forward planning. Indeed, an instant panacea for the rolls, but a worthwhile sop, perhaps.

I was going to close with a laudatory paragraph about SOU's Educational Academy, but I was interrupted by a colleague who said: "I've decided that I'm not going to do it. I've decided that I'm not going to do it. I've decided that I'm not going to do it." (1) I might read this and he's bigger than me; and (2) I was seconded last year.

John Mackay is deputy head of St John's School, Warr.

Still afloat in Brighton?



Back in the 1960s, Sussex University promised students nothing less than a 'new map of learning', but critics claim it has since lost its bearings. Rick Rogers returns to his alma mater to make his own assessment.



Sitting in on the University Court meeting, I listen to vice-chancellor Sir Denis Wilkins cataloguing his difficulties. It sounds depressingly familiar - a 20 per cent cut in University Grants Committee funding since 1981, serious financial problems ahead, deteriorating buildings, a worsening unit of resource per student, loss of senior teaching staff, cuts in technical support, less capacity to develop new teaching material, . . . now reached the point to re-examine radically the whole mode of teaching.

But this is Sussex - once the most innovative and sought-after of the new universities of the 1960s. It remains the most famous and, alas, for some still the most infamous. Just 25 years on, has it now mislaid (perhaps even torn up) the "new map of learning" espoused by Asa Briggs?

For the first intake of October 1961, 500 applied and 94 were offered places. Fifty-one came. Women were keener to try out the new map, outnumbering the men by two to one. (The male/female balance quickly righted as Sussex's believe pupils do too. The proportion of female sixth-formers realized too it was the campus to be.) By 1965, there were 20 applications for every place. For a time, Sussex was more sought-after than Oxbridge.

Ironically, Sussex was in many ways the product of frustrated Oxbridge academics such as Briggs, John Fulton, David Daiches, Roger Blin-Stoyle - founding science dean and now on secondment to chair the School Curriculum Development Committee - spoke of his concern for the way undergraduate courses were being run at Oxford. He felt "Sussex would allow one to have one's own way".

Such a promise attracted top academic talent and encouraged new subject areas. One future dean of studies was sold the Sussex idea on a prolonged tube journey. The School of African and Asian Studies was thought up by Asa Briggs and Anthony Low travelling between Allgarh and Delhi in 1961. "Such is the way things took shape," comments Blin-Stoyle. From the first, the intention was to innovate.

That meant two things: inter-disciplinary courses - the putting together of different subjects and finding links between them - and tutorial teaching. The "Sussex idea", as it was dubbed, was to relate specialized knowledge to more general clusters of knowledge and experience, thus turning expert opinion into more soundly based judgements. It meant students doing a common preliminary course for two terms, deciding on a major subject and adding contextual courses in other subjects. They were attached to a school of study rather than a department - a proscribed word.

The main method of teaching became the tutorial or small work group - often just two students per tutor. Lectures were ancillary but sometimes packed out. Every student was assigned a personal tutor.

Yet the university no longer readily considers any of this its most conspicuous success. The concept of inter-disciplinary courses and more personal tutoring has spread to other universities - a powerful success in itself. At Sussex though, both ideas have been diluted - the tutorial group ratio has worsened; preliminary courses abandoned; the science schools never wholly embraced the Sussex idea, often operating as single-subject departments in all but name. Administration is more centralized (particularly after Jarratt's rationalization probe), weakening the organizing basis of the schools; an arts/science scheme, with students crossing disciplines to take short-term courses, faltered when the arts side withdrew. Even from the start, a tension existed with some staff who had little interest in the Sussex idea.

Two reasons for the dilution keep cropping up - academics complaining of their teaching loads and years of financial cuts. The flexibility demanded by innovative work was harder to maintain as resources were cut.

A 1960s graduate picks out two detrimental changes - the loss of the preliminary courses which had encouraged new students to share experiences across a range of areas such as philosophy, psychology and economics; second,

the poor physical state of the university - she instances the artificial lakes around part of the campus - "dirty and clogged up, and now drained".

Success today is seen as research achievement (an aim from the beginning) - with Sussex regularly in the top three in terms of proportion of income from research grants; and numbers of academic awards - two Nobel Prize winners, 17 Fellows of the Royal Society (six times the national average), more Fellows of the British Academy than the other 18 post-1960 universities put together.

In effect, Sussex is saying it can compete on establishment terms as well as on its own. Indeed, this arts-dominated university (arts/science places ratio is 2 to 1) has, with a physicist as vice-chancellor, pressed through the 1980s its claim as a centre of science excellence too.

The university is now in its third phase of development. Following rapid growth in the 1960s and consolidation up to the mid-1970s, we are now in the lean years accompanied, says Blin-Stoyle, "by apprehension and foreboding".

That 1960s glamour was soon tarnished - spoilt by minor, but highly publicized, late-1960s and early-1970s student disruption - flag-burning, paint-throwing, sit-ins, stopping speakers. Media attention became perverse and unwelcome - overstating the disruption as much as it had the glamour. Briggs commented at the time: "What happens at Sussex always receives more attention than what happens in other places." Applications fell dramatically in the 1970s, and a recent revival still puts them adrift of the early, halcyon days. Some headteachers still refuse to endorse a sixth-former's application to Sussex.

What the media - and parts of the education world, notably schools - failed to latch on to was the continuing excitement of the academic innovation at Sussex. So has it produced graduates who are significantly different from the others?

Few academics or past students would venture an opinion on this. John Fulton, the university's first vice-chancellor who died earlier this year, said it was "too early to tell". Others suggest they become better problem-solvers, skilled at lateral thinking, are good communicators. Certainly a high proportion go into the media. Many also go on to do research or higher degrees - in the 1970s the proportion was running at twice the national average. Teaching has always been less popular as a career with Sussex graduates. The Sussex student is more likely to travel, or do overseas ad work before settling into a long-term career.

The university has no official profile of the Sussex student. But a confidential survey of arts and social studies students graduating in 1979 (set up to try to make sense of Sussex graduates' alleged poor job-getting record) provides the following picture: 1 in 4 was aged 21 or over on entering university; 60 per cent came from London and the South East; 1 in 5 had been to independent school - only 45 per cent came from the state sector; half did not come straight from school; 1 in 5 had four or more A levels. Social class was not looked at but a later 1982 survey showed that 60 per cent of students did not get the full grant and 13 per cent received a minimum grant.

Today's students are said to be as concerned as those elsewhere to get their heads down and graft. Several staff said they look to the new appointment as a way to revive the spirit of the 1960s after years of retrenchment and declining morale. So whatever the criticisms and disappointments voiced by founding academics and graduates, many do still see Sussex as offering something special. It just needs a new copy of the map.

The relaxed atmosphere of the sixties and seventies has given way to a more studious approach. But Sussex is still dogged by its reputation for student unrest; left, Dr David Owen tangles with students in 1981 after being pelted with tomatoes.

In the face of the unemployment figures. One 1960s undergraduate now on the university staff commented: "In the 1960s the campus was populated by affluent, showy characters - socially very aware. Now they are very normal, average students who are serious about working. They were serious in the 1960s too but also serious about their leisure."

Most students now come knowing little about the Sussex idea and the different experience they might have. It still has an effect. What that might be was recently summed up by Victoria Bourne, a student from 1977 to 1981, reminiscing in a new book on the university, *The Sussex Opportunity*: "Sussex did not answer any questions for me; it only taught me how to pose more."

Yet a few of the long-standing academics, growing old with the university, find students less enquiring, more predictable; the campus less lively with fewer speakers invited down, fewer innovative activities. It is, said one, a more grown-up and stable community. The more interesting are said to be the mature students to whom Sussex has long been more encouraging than most other universities. It also runs a special entry scheme for inner London comprehensive with no record of higher education entrants. This has had disappointing results and is frequently up for re-appraisal. But to drop it is seen as killing off a bit more of the Sussex idea.

Maurice Hutt - in from the beginning and now a semi-retired senior history tutor - believes strongly that Sussex is standing up well. Talking in one of the staff/student common rooms, he uses it as an example of the vital cross-fertilization that goes on both between disciplines and between disciplines and between students and staff.

But he remains apprehensive for the future, listing three dangers - external pressures and prejudices against non-departmental structures (the UGC has, say both Hutt and Briggs, often failed to acknowledge or even seek to understand the Sussex idea); internal moves towards more central decision-making "reducing the school's visibility as a working, financial unit"; and, finally, the need for new academic blood.

Since Sussex started with so much young blood, many are still there. (The moving-on rate has been less than 5 per cent of faculty a year.) "The crucial people for renewal are the 35-year-olds - we are short of a generation."

Next year, a new vice-chancellor takes over. Several staff said they look to the new appointment as a way to revive the spirit of the 1960s after years of retrenchment and declining morale. So whatever the criticisms and disappointments voiced by founding academics and graduates, many do still see Sussex as offering something special. It just needs a new copy of the map.

The Sussex Opportunity - a new university and the future edited by Roger Blin-Stoyle and Geoff Ivey, Harvester Press, £7.95.

Rick Rogers was an undergraduate in the School of English and American Studies at Sussex University between 1965 and 1968.

Clueless quizzes

DIANA WHITE

In the National Gallery, a little girl waving a questionnaire ran up to Rubens' *Miraculous Draught of Fishes*, followed by her parents. "What have you got to find here, honey?" asked the mother. The child answered: "I've got to count how many different kinds of fish there are in this picture." They all counted the fishes, wrote down the number and moved on quickly to the next painting on their list, without having seen Rubens' pink-and-gold picture at all.

In the Hayward, I walked into a room crammed with pictures of the

sort of subtle design and sensuous paintwork that needs a lot of sitting-down-in-front-of. Soon I was joined on my bench by a succession of 15 and 16 year-old school girls. As each came into the room, she scarcely glanced at the paintings before bending her head over an enormous questionnaire, then dashing off to repeat the ritual in the next room, and the next, all the way to the teacher waiting at the exit.

One of them told me they had come down for the day from Manchester, and that already that morning they had carried out similar exercises at the Tate and the National Gallery. Did they like doing it? "Not really," she said. "It'd be more interesting if someone was giving us a talk about the paintings." There hadn't been a preliminary talk at school? No, they had only been given another questionnaire, this one to be completed before they came to London.

As a student, newly alerted to the

behaviour of children in galleries, I had asked my tutor in some puzzlement, why so many children were tearing around trying to find the answers to such aesthetic questions as: "How many rings is Elizabeth I wearing?" "Yes," sighed the tutor, "This is a bad old habit we thought we'd got rid of 30 years ago." Far from disappearing, it seems to be on the increase, in galleries and in schools.

One gallery quiz for 9 to 10-year-olds leads them to a rich portrait by Murillo. "What time does it say on the clock?" asks the quiz. "What kind of clock do you think it might be?" Younger children get offered those colour-in outlines which are the despair of art-teachers. Even the few perceptive queries are often phrased as leading questions, so that you discover the answer to one by reading the next: 1. Is there a sense of movement in this picture? 2. How is it conveyed?

ing thing has been that new faces appear every time. After two-and-a-half years we have now levelled off at about 50 a weekend. How does it work?

There is a co-ordinator in the PSA who has a computer print-out of all the volunteers' names, addresses and telephone numbers. Each committee member is given a list of 12 people to ring the week before. Information is then fed back to the co-ordinator. The parents offer to work for one or more shifts - Friday night, or morning or afternoon on Saturday and Sunday. One lady worked every shift last May - her pride and joy was a daisy girls' toilet, which she transformed into a thing of beauty in pale yellow and blue. Coffee and tea are provided at regular intervals and we all chat in a group before going back to work. There is a great sense of community and the productivity rate is remarkable - the general standard of painting is pretty good too. We have now painted about 60 per cent of the school and so are well on target for the five-year

The divisional surveyor has been most supportive and on almost every

Some heartfelt words come from the targeted children. Amanda, 10, would really prefer to go around without a quiz because, "sometimes I like writing, and sometimes I don't" - a reminder that worksheets can be a burden to those who are slow learners, or dyslexic. "Too many questions for each picture", grumbled Ellen, 8, who wasn't slow at all. But Peter, 7, said wistfully: "I'd rather I was walking around looking at paintings by myself, but then," he added with a resigned shrug of his shoulders, "I ain't, ain't I?" at which his father's smile vanished, and so did I.

I vividly remember the awe I felt when I was first taken by my school to see the towering Egyptian statues at the British Museum, the same statues that today's schoolchildren scurry around unheeding, with eyes only for their worksheets. While it is rewarding for them to learn the historic and symbolic overtones of a masterpiece,

this comes a long way behind learning to understand the impulse which drives an artist to create a particular work. "The trees are in blossom," Van Gogh, "and I want to paint a picture of astounding gaiety".

Of course many children do enjoy the gallery quizzes, and classes taken around have sometimes had to do one to round off a visit. I listen to Lucy, 12, who never misses a quiz, "I used to look at the details just look at the details". Watch as the families doing the gallery quizzes. It's the parents who are really keyed up with enthusiasm. Making themselves into experts for their children. So perhaps quizzes and questionnaires are an excellent idea after all - for keeping parents (and teachers) out of mischief.

Diana White is a former comprehensive school teacher.

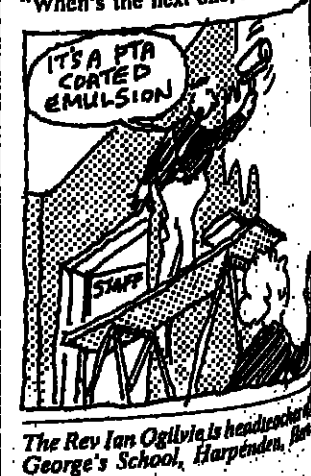
deal from them. It means two-and-a-half days' extra work each term, but it's worth every minute. I know I'm better in decent conditions than our diningroom and assembly hall, which were much too massive jobs for amateurs to undertake.

Two years on, the scheme is no longer the great talking point among the pupils that it once was. There has, however, been a reduction in vandalism, perhaps because there is a feeling that if the parents are doing the painting, it makes a difference.

The staff have appreciated teaching in light, clean classrooms and a number of them have taken part in the scheme. They redecorated their own common room last year and it now has a relaxing pale blue and beige colour scheme.

The sixth-formers, as I write, are painting their common room, and the PSA are now planning the autumn term's programme.

As for me, meeting parents in a more informal situation has been enjoyable. Chats lying under a radiator or sitting on scaffolding, painting a ceiling, can help, headteachers seem less remote figures, and I learn a great



School of painting

IAN OGILVIE

"It has made us feel much more part of the school." "I feel I'm doing something to benefit my son." "The place looks so different." "Count me in next time." These are some of the comments made by parents at St George's School, Harpenden, who have become involved in the parent/staff association's five-year plan to decorate the buildings.

New headmasters always have bees in their bonnet and mine, when I came to this voluntary-aided co-educational school in 1984, was to make the brightest and most attractive environment possible in order that pupils could achieve their maximum academic potential. It was interesting to read the HMI report of last year which made the clear point that work

performance was related to the physical surroundings in which teaching occurs.

When I arrived, Hertfordshire had a virtual embargo on all redecoration - something common to many authorities suffering from education cuts. (I managed to get my study redecorated only on the grounds that the ceiling was falling down!) Soon, it became clear that there were two alternatives - either to wring my hands and write fruitless letters of complaint, or to use self-help.

I was lucky in having a PSA which must be the dream of any headteacher, enthusiastic, articulate, but ready to get their hands dirty, not just talk. Of course, many schools have had decorating weekends, but I was determined this would not be a one-off effort, but follow a clear plan. I reckoned it would take five years and they responded positively; we agreed on a target of two long weekends a term.

In February 1984 we began with 40 people and since then more than 170 have been involved. Some turn up each time we meet; others may come once or twice, but the most encourag-

ing thing has been that new faces appear every time. After two-and-a-half years we have now levelled off at about 50 a weekend. How does it work?

There is a co-ordinator in the PSA who has a computer print-out of all the volunteers' names, addresses and telephone numbers. Each committee member is given a list of 12 people to ring the week before. Information is then fed back to the co-ordinator. The parents offer to work for one or more shifts - Friday night, or morning or afternoon on Saturday and Sunday. One lady worked every shift last May - her pride and joy was a daisy girls' toilet, which she transformed into a thing of beauty in pale yellow and blue. Coffee and tea are provided at regular intervals and we all chat in a group before going back to work. There is a great sense of community and the productivity rate is remarkable - the general standard of painting is pretty good too. We have now painted about 60 per cent of the school and so are well on target for the five-year

The divisional surveyor has been most supportive and on almost every

Boys' own papers

Elizabeth Hendry illustrates how last year's O levels discriminated against girls

Although pupils only take examinations during a very short period in their school lives, their effects reach back over several years. As they prepare for them, if these papers favour boys over girls, both groups of children will be receiving implicit instruction throughout this period about how they should see themselves and the opposite sex.

The coming of the GCSE offers an ideal break when a radical new attitude to the sexes could be introduced.

If the new papers were to be subjected to rigorous tests for sex bias, the effects of the changes of emphasis would immediately be felt in the top of the school and would probably filter through to the rest of the school quite quickly, as new habits of thinking and looking at subject matter develop.

It must be quite difficult for teachers to set unbiased examinations, because discrimination is so much part of our lives that we often take it for granted. Perhaps it would help teachers if they had clear classifications of the types of bias that occur and practical examples of the types of questions that are discriminatory. On behalf of the Fawcett Society, therefore, we analysed some of last year's papers, using London University's guidelines, *Sexism, Discrimination and Gender Biases in GCE Examinations*, as the basis of our research.

Because there are so many boards and subjects, we restricted ourselves mainly to the summer 1985 O level papers in English, French, maths and the sciences. We concluded that there appear to be six types of sex discrimination:

The overall effect of a paper can be biased because reference is made predominantly to one sex.

Take, for example, the Oxford and Cambridge (O&C) 36-40/6 French reading comprehension paper. This has a multiple-choice format with a very heavy overall bias towards men. Working backwards through the paper, part 3 is a neutral passage on tourism. Part 2 is a passage about brown bears in the Pyrenees. We meet a shepherd, a boy and a famous hunter - all male, of course. Then there is Part 1. It has 11 questions. Each sets a situation and then offers four possible ways of continuing. There are 13 male characters and five females, of which, one is a housewife, who is happy that her ironing is ready to be put away, two are wives who reply to their husbands and one is a mother, delighted that her son has passed his

Perhaps it is not surprising that Wood, 1976, has been able to show that boys do as much as 20 per cent better than girls on this type of paper.

The presentation of men and women in the paper is stereotyped. Men are admirable, women frivolous.

The Welsh Joint Education Committee (WJEC) English essay question asked for a description of the best and the worst of the girl (with the curl), who was either very good or horrid. The boy, on the other hand, didn't think himself heroic, but...

In the Associated Examining Board (AEB) French examination, paper 1 had a piece entitled "A daring hold-up" about two men holding up a jeweller's shop. The second piece, "A worried mother", is about a mother who keeps checking to see if her daughter spends all night in her own bed, but who doesn't really know what to do about the times she finds her missing.

Paper 2, question 1 in the same exam starts with a piece about a very courageous 19-year-old boy, who had spent two days alone in the African jungle when he was 12, setting off in an eight-metre yacht for a solo Atlantic crossing. This is followed by a woman at home, looking after her two sons. Then two sisters, who fight for the first time ever over a handsome young man.

Question 2 says that you have written to a French hotelier and you should finish the reply, whose salutation is "Monsieur..." Yet the DES *Statistics for Education 1983* shows that two-thirds of all entrants and passes at O level are girls, who are hardly likely to expect to receive such a letter.

Questions about subjects of interest to only one sex.

In the O & C English Language papers, four of the five sections are about "boys' subjects". Ships, masters in a boys' school, the ritual slaughter of a shoal of porpoises, and a "murderous patriarch" of a pike catching a chub. Of the 10 essay subjects, those likely to interest boys are: blood-thirsty nature, a man, computers, harbours, and a quotation about being a cog in a machine. Unlikely to interest either: early retirement, hurry. Might possibly be intended for girls: an inexplicable action, a female gazing at her grandmother and a story about the picture of a pig. That means three-tenths of one-fifth of the exam might have been intended for girls.

The assumption that people are male, and so is the genotype. Girls and feminine pronouns go into brackets, if they appear at all.

For example, you find "a person's blood group" by testing his blood. (Cambridge Science, physics) The "testis of a mammal" is involved in



the fertilization of the egg of a "female mammal" (Oxford chemistry with biology).

The authors of texts are almost exclusively male.

In the AEB's Alternative English papers, out of 16 authors, mostly of the 19th and 20th centuries, only three were women. However, Muriel Spark's *Mandela's Gate* is at least a more imaginative choice than either Eliot or Austen.

The WJEC offers Coleridge, Dickens, Lawrence, Thomas, Hartley, and Laurie Lee. Their plays are *Conduct Unbecoming*, *Arms and the Man*, *An Inspector Calls*, *A Man for all Seasons*, but is *Romanoff and Juliet* the thin end of the wedge for girls?

In the past, the excuse for choosing male authors has been that there have been so few good women writers. But now Dale Spender and Pandora Press have come to the rescue of the examiners. At the end of May, they published *Mothers of the Novel - 100 good women writers before Jane Austen*. This reveals a wealth of talent that has been ignored and hidden from women for centuries. In addition to this literature course, Pandora has reprinted 16 of the novels discussed.

For information about novels by women coming after Jane Austen, there is a book by Elaine Showalter, *A Literature of their Own*, dealing with authoresses from Brontë to Lessing.

Plays by women are no longer impossible to find either. Methuen Theatre file has reprinted *How the Vote Was Won*, which was a big West End success earlier in the century, and other suffragette plays. Restoration drama by women (see *The Female Wit*), sheds a whole new perspective on well-known men's plays as well as being interesting in itself.

Passages chosen for criticism and comment have a strong male bias.

The Southern Universities Joint Board (SUJB) set speeches and conversations involving Juliet, Romeo, Benvolio, Tybalt, Mercutio, Henry IV, Hotspur, Falstaff, Orsino, Sir Toby, Sir Andrew and Antonio. With this selection of plays, it must surely have been possible to find a balanced set of passages, so that girls could choose to discuss characters with whom they have at least the possibility of identifying.

London's poetry section started with questions

on a printed passage about an old man and a boy. The rest asked for comments and comparisons on the *Prisoner of Chillon*, *The Eve of St Agnes*, *Morte d'Arthur*, *Crossing the Bar* (which uses images of going to sea to talk about death), *The Lotus Eaters*, *The Lady of Shalott*, and *The Coming of Arthur*. Yet, any women appearing in these poems are either abnormal or act in stereotyped ways.

O & C's novels section offered *Huckleberry Finn*. Possibly three of the quotations to be attributed in question 1A (10 marks) came from women. The only other mention of a woman on the paper was a suggestion that in writing a 'newspaper report of Huck's disappearance, you might like to include an account of an interview with Miss Watson.

It was a little difficult to criticize the science and mathematics papers in general. It is well known that girls are not often encouraged to be interested in the workings of chemicals, cars, or levers but, since these are the subject under study, we wouldn't want to complain about questions being asked about them. It does seem important, though, that the teaching of these subjects become more "girl friendly", so that this apparent bias would no longer suggest itself. An



Muriel Spark, an imaginative choice, and Doris Lessing: women's own literature

interesting new book on this subject is *Girls in Science and Technology* by Judith Whyte.

Some papers, particularly in chemistry, were unbiased. We felt, though, that women and girls tended to be conspicuous by their absence. These questions, once they are set and changed, would surely be a simple matter to go through the participants' names from Mr to Mrs. It would also not be a bad idea to change all the women's names to men's, then girls would not quite so often be presented with stereotyped expectations and boys could begin to see themselves in male and domestic roles.

We did not attempt to examine the history papers of all the boards, because there is so much bias in the reporting of history. However, we looked at the Cambridge papers, which could make some constructive suggestions.

Apart from paper 3, the topics covered are overwhelmingly political and military. This means that most of the questions will involve the technical developments in textiles. There were big changes for women in the law, education and medicine between 1815 and 1918. These, and the gaining of the limited franchise in 1918, have led to fundamental changes in society. We think they could be made the subjects of very interesting questions.

We have used examples of discrimination against girls throughout this discussion, for the sake of simplicity. This does not mean, however, that what we say does not apply to boys and other social groupings. It seems likely that the concentration on stereotyped subject matter, could put boys off just as well as girls. Not all boys are cast in the mould society has ascribed for them. There are many who are socially mature and aware, who would probably be much more interested in questions that might be thought to be directed at girls.

Nor do we suggest that, if more questions were set about and for women, girls would want to answer only this type of question. We only say that it is not fair that boys should be offered choices of questions on subjects that are traditionally supposed to interest them and about people of their own sex, when girls are offered little or nothing that has even traditionally been seen as of interest to them, let alone subjects that might really attract them.

Me and my shadow

Tony Watts on the job shadowing schemes that shed light on the world of work

This summer, the Department of Trade and Industry, in conjunction with the Institute of Directors, is running a high-profile scheme in which a large number of top executives are being shadowed by sixth-formers for a week. Meanwhile, often with the encouragement of the School Curriculum Industry Project, several schools have set up schemes of their own.

What is work shadowing? And what are its pros and cons?

Work shadowing describes schemes in which an observer follows a worker around for a period of time, observing the various tasks performed in the job, and learning about the worker's role. The key to shadowing is vicarious experience: keeping in step with workers, watching what they do, identifying with them, and so developing an understanding of what their role involves.

Observation alone, however, may sometimes become boring, especially when jobs are monotonous and repetitive. There is therefore room not only for talking to the worker but maybe even for helping him or her with particular tasks.

This might seem to make work shadowing the same as work experience. The key distinction, however, is that in work shadowing "helping out" is subordinate to understanding the role of the worker who is shadowing. In work experience, on the other hand, the main focus is on the work tasks: on actually doing a job yourself.

One of the advantages of work shadowing is that it offers access to occupations such as dentistry which do not lend themselves to work experience because of the skills and knowledge that are required. Work shadowing is also more economical in terms of time. A valuable experience can be had in one or two days: with work experience, three weeks is sometimes considered to be the minimum needed. One result is that it becomes easier to organize more than one work-shadowing placement for each student.

Against this needs to be set the fact that work experience will be more rewarding for some students because it is longer and more "hands-on". The two techniques are not "better" or "worse" than one another, but are appropriate for different purposes with different groups.

Shadowing can take many different forms within a school. At North Westminster Community School, London, the whole of the fourth year went out for two days' shadowing as part of an "occupations" programme. At Waltham School, Sheffield, an English teacher organized one-day shadowing placements for his class as a means of improving their inter-personal and communications skills, and to provide an additional base of experience on which to draw in their classwork. At Crofton School in Hampshire, the school orchestra shadowed a professional symphony orchestra for a day, attending rehearsals and a performance as well as having a lot of more informal contact.

His story: Clifford revenges his father's death by slaying the young Duke of Rutland in 1480. But when do examiners ask about the devastating effects of the War of the Roses on ordinary families or (opposite) about the revolution in women's employment in the 18th century?

The representation of ethnic minorities in these papers was non-existent.

While we have concentrated on reporting the problems, we have to say that most of the boards seemed to have made at least some attempt to change things, even if it was only to switch the gender of an occasional pronoun. But the best boards were clearly Oxford and London. Both had obviously made efforts to balance their papers and make them interesting. Well done, Oxford and London; we look forward to finding the next lot even better!

□ This group proposes to meet again in the autumn to look at this summer's papers and the specimen GCSE papers. It is intended that the results of that research will be published early next year, as a new pamphlet in the Fawcett Education Series.

References: *Opening Doors... to equality in education and training for girls*. The Fawcett Society, 46, Harleyford Road, London, SE11 5AY. £1 post free.

Sexism, Discrimination and Gender Biases in GCE Examinations. University of London School Examinations Board, March 1985.

Mothers of the Novel. Dale Spender, Pandora Press, 1985.

A Literature of their Own. Elaine Showalter, Virago.

How the Vote was won. Methuen Theatre File.

The Female Wit. Fidelis Morgan, Virago, 1981.

Girls into Science and Technology. Judith Whyte, Routledge and Keegan Paul, 1986.

Women in Anglo Saxon England and the impact of 1066. Christine Fell, Colomnade, British Museum Publications.

Elizabeth Hendry is a developmental psychologist and a member of the educational sub-committee of the Fawcett Society. Diane Montgomery, Diana St John, Audrey Jones and Anne Wallon helped with the research.



Illustration by Alan Cornes

Jonathan Croall offers an appreciation of Dora Russell



For Jean Liedloff, "Western civilization is a pathology, maybe the greatest tragedy that has happened on this planet. . . even the dinosaurs probably died happy". By failing to "respect our nature as a species", our "innate knowledge of what is correct", and by saying instead "We know better, let's outwit Nature", we have done ourselves irreparable harm. "If we don't get what we expect, our wellbeing diminishes."

Put so generally, such views may sound fairly familiar and even rather thresome, but Liedloff's book, *The Continuum Concept* (re-issued by Penguin last month with a new Foreword, £3.50), is a fascinating account of her five expeditions among the "Stone Age" Indians of Venezuela and the lessons she brought back from the South American jungle. She has seen with her own eyes, she claims, that the generation gap, for example, the terrible conflicts of will between parents and even young children, are quite unnecessary. She has seen people who do not suffer from "vague feelings of being bad" most of the time and whose normal emotional state is "happy—I mean, really hilarious". When I spoke to her in her flat in North London overlooking Primrose Hill, I asked about the mistakes we make with our very young children.

We are still dominated by the idea of Original Sin, she claimed, and think that a baby has to be *tamed*. "We view it as a tyrant or a common and declare war on it." In fact, we have only survived up to now because we are *innately* social and do not need "to have our nature quelled in order to



Lessons from the jungle

Matthew Reisz talks to Jean Liedloff

experience — “totally passive but just feeling fine” — which can be sought but never found in, for example, drug addiction. One of the most eloquent sections of Liedloff’s book suggests how many of the familiar neurotic personality types — the slob and the Casanova, the martyr, the adventurer and the compulsive academic — reflect different kinds of “in-arms deprivation”.

Parents who are themselves consumed with “left-over infantile needs” often make children the centre of attention in an attempt to win their approval, even though this is “very disorientating for a child”. What is far more natural is for adults

Jonathan Croall is the author of *Neill of South
merhill: The Permanent Rebel*.
A meeting to celebrate Dora Russell's life will
be held shortly in the Conway Hall in London. It
will mark the publication of three volumes of autobiography, *The Tenth
Tree*, are published by Virago.

The man who knows his parish knows the world far more than many a traveller. It isn't a bit surprising that the two topics that fascinated Whitelaw most were hibernation and the migration of birds. But, confined by choice to his village, he yearned for like-minded contacts and maintained regular correspondence, always seeking information. His book itself, though cunningly contrived over many years, is presented in the modest form of letters to two friends. He knew Joseph



Banks, who set out on Captain Cook's grass-walk-sweeping are his delight. I written "The twigs which the rook

Some commentators have regretted that White only describes his human parishioners in terms of their relationship with the natural world. White, except perhaps Thoreau, would have

Materials for White's life are meagre and Mabey's is the first biography in 80 years. He remarks that putting it all together from account books "is an exercise as deeply and hopelessly immersed in speculation as an archaeological dig. There are a few shards of certainty and mounds of possibility. He has done it with great distinction, showing how White's work relates to his books and journals, and just why it was a watershed in English observation of nature. His evocation of the landscape is brilliant. We seem to be jogging down those deeply rutted lanes behind the parson, looking over his shoulder.

The secret of life

by Jon Turney

Nevertheless, they were enough for Mary Shelley to blend Gothic imagery, a re-working of the Golem and Faust legends, and her protagonist's symbolic rejection of alchemy in favour of proto-science, to fashion a tale with a resonance all the more powerful now that biology has justified her memorably sexual image of scientists who "penetrate into the recesses of nature and show how she works in her blinding places". In the popular mind Frankenstein looms over a great swathe of modern biology from heart transplants and kidney machines to test-tube babies and genetic engineering.

Victor Frankenstein declined to build his creature a bride, but its descendants still multiplied. And the army of androids, cyborgs, mutants and monsters which infest popular fiction surely testify to an enduring collective unease about the scientific manipulation of life, a deep cultural neurosis as Ray Hammond calls it.

But while *Frankenstein* is a weighty exhibit in the case for public ambivalence toward science and scientists that does not mean the tale is any belated as a framework for thinking about modern biology anywhere outside "shock horror journalism." Frankenstein's monster as we now know it is the Karloff-and-Lurex figure which first shambled across Universal's studio lot in 1931. Yet Ray Hammond's argument in this book is that the detailed origins of Mary Shelley's 19th-century original are somehow pertinent to an account of recent science.

In support, he offers a biography of Mary Shelley and a detailed narrative of the book's composition. This is interspersed with brief accounts of the work of "modern Frankensteins," busy cloning mice, splicing DNA, growing babies in laboratories and building intelligent computers. Unfortunately, the science is generally inaccurate and the links with the primary narrative tenuous.

Thus, a comment on Mary Shelley's striking physical appearance leads into a discussion of cosmetic surgery and then, somehow, to a few paragraphs on genetic disease, and then a gloriously muddled attempt to explain the use of monoclonal antibodies in cancer therapy. These parts of the book are poorly researched and repetitious, and the result tends to be confused and confusing.

A further problem is that Hammond maintains he is using Frankenstein simply as a vehicle to explore related developments today, without any pejorative or sensational intent. Yet he falls prey to just the sensationalism he claims to eschew. The development of fully functional artificial wombs for humans is inevitable, he says at one point. A few pages later, he declares there is undoubtedly covert experimentation in progress in reproductive technology, apparently unaware of the substantial, and very public, growth of *in vitro* fertilisation for clinical use and research.

The impression left is that Frankenstein may offer "a powerful vocabulary" for discussing the future of the "twentieth century," as Hammond suggests. But it does not provide a very useful vocabulary for discussing this science in any detail, any more than Faust or Brave New World. Rather, its continuing life is partly due to our failure to develop an adequate vocabulary to debate our assumption of control over evolution, even though that control is almost with us. To maintain otherwise, as this book does, is to perpetuate the popular notion that debate, by mistaking powerful cultural symbol for an ethical solution, is sufficient.

Logorrhoeic lady

As she recorded in her own reminiscences, her childhood was spent with books; she was reading Sidney's Arcadia when she was seven. The books were the real thing, not the rest of life. Indeed, she did not emerge from what she called "the bright cloud of illusion" until she was getting on for 30, when her elder brother Harry

announced that the literary make-believe game that they had been playing for 25 years, called TAR (on Tennyson and Ralph) was over.

Her niece Annabel Farjeon has put together in *Morning Has Broken* a highly professional and judicious biography of this logorrheic lady who quotes all those sources with the greatest possible assurance. She quotes a long letter from D H Lawrence, to whom Eleanor had sent her poems. He characteristically replied having said there was "real poetry in them": "But never to the last drops of bitterness will you drink, never face the last embrace of fire, your poems, and his poem." On "wish that I could ever read a line of Elizabethan poetry in your life, and then we might have had pure utterance from you."

That was no more than we would expect from Lawrence, but, leaving aside their obvious differences in taste, the charge is just. Even after the ending of TAR, Eleanor never seemed entirely to have grown up, and although she did not think of herself as specifically a children's writer, it is in children's anthologies that her work mostly survives. And would it be unfair to suggest that many of her relationships with grown-ups carried with them a similar hint of make-believe?

Annabel Farjeon cites Maitland
Radford's advice to Eleanor-not to



Eleanor, aged 11 sentimentalize herself: "Whatever you do, Nellie, as you grow older - don't get cosy." But the advice was not heeded. "Endearments and kisses flowed out to almost everyone she knew . . . The gamman, the tax man, child and lord were all gathered into the circle of her

Lessons from the jungle

Matthew Reisz talks to Jean Liedloff



experience – “totally passive but just feeling fine” – which can be sought but never found in, for example, drug addiction. One of the most eloquent sections of Liedorf’s book suggests how many of the familiar neurotic personality types – the slob and the Casanova, the martyr, the adventurer and the compulsive academic – reflect different kinds of “in-arms deprivation”.

Parents who are themselves consumed with “left-over infantile needs” often make children the centre of attention in an attempt to win their approval, even though this is “very disorientating for a child. Even what is far more natural for parents

to speak to adults; children can learn by "reading," testing things, making things, climbing trees or things" or by listening to adults "talking about things" or from slightly older children. Since children are natural learners as well as natural learners, such children form a tremendously important and efficient reserve in the education which is very largely unopened up possibilities (Computing has, perhaps, opened up possibilities in this area which would not be applicable in traditional academic learning.) Indeed, if we have traditional academic learning, it is because that children, left alone, "learn like sponges" and most exquisitely expert way a burden. In many cultures, far from being a burden, they play a role in the family labour force by doing four (or younger), the results of much contemporary education are hardly encouraging: "If you send children to school the first day - the day they stop learning."

Such statements suggest how difficult it is to make the world of letters feel that particular Western bibliophilic institutions need to be changed in the light of a new, more radical, and more inclusive conception of the whole course of human development. They also suggest, I think, why the book has irritated and distressed as many people as it has inspired. But any book which sets out to determine how to change the world must not be deterred by the risks of controversy. *The Continuum Concept* is moving and heartening as well as distressing, and also salutary to have Western arrogance put so firmly in its place: "There's no sense saying that we're the savages, because we're not savages, well, that's fine for the savages, but that's not what we're saying, because we're exactly like that - we're savages."

Morning Has Broken: A Biography of Eleanor Farjeon. By Annabel Farjeon. Julia MacRae £14.95. 0 86203 225 3

The biographer of Eleanor Farjeon has plenty to draw on. There are 80 books — memoirs, biography, fairy-tales, much whimsical fiction, poetry and nursery rhymes. There are the fizzing librettos, many of them written with her brother Herbert. And there is a rich, rich outpouring of letters in all directions, though inevitably there were some bonfires. Edward Thomas, whom she adored, burned all her letters to him; luckily his to her survived.

The engaging schoolmaster George Earle, her lover for more than a quarter of a century until his death in 1949, is quoted by her as having said: "Every impression which falls on the sense or the mind must be exchanged into a word before it can live." Earle hardly wrote anything: for him it was enough to find the word. For Eleanor and her family it had to be written down as well.

As she recorded in her own reminiscences, her childhood was spent with books; she was reading Sidney's Arcadia when she was seven. The books were the real thing, not the rest of life. Indeed, she did not emerge from what she called "the bright cloud of illusion" until she was getting on for 30, when her elder brother Harry

BOOKS

Home run

Housing Land Policy. By Yvonne Radin.
Gower 0 566 05072 2.
Home Ownership in the Inner City. By V. Kari, J. Kenney and P. Williams.
Gower £16.50. 0 566 05056 0.

The ways in which these two books deal with some of the important issues currently preoccupying housing policy makers are fundamentally different: one is empirical, easy to read, direct and potentially - given the right readership - influential; the other, theoretical, heavy going and of little consequence beyond getting its author a PhD. To briefly deal with the latter first, *Housing Land Policy* takes a long time to explain that under the present government House Builders Federation and the private sector have reached centre stage in housing policy, while town planners and public authorities have been pushed to one side and blamed for everything that has gone wrong in housing. The author stresses the contradiction inherent in Thatcher's housing policies but because all the arguments are set within grand theories, the book loses its focus and its impact.

On the other hand, *Home Ownership in the Inner City* is so damaging to the government's ideology that the Department of the Environment, which originally commissioned the research, refused to publish it. Through the analysis of substantial primary data, including interviews with home buyers in Liverpool and Birmingham's inner areas, the authors paint a picture of owner-occupation which is very different from that generally given. Poor owner-occupiers in the inner city appear trapped in a cycle of decline and deprivation from which they cannot escape. "The problems include:

lack of conventional mortgage lending... to the vulnerability of buyers... to the vulnerability of buyers... to the vulnerability of buyers...

As a result the two assumptions that (1) owner-occupation in the inner city is the first step on a rising ladder towards good suburban life, and (2) that the housing stock is in all cases better looked after by owner-occupiers than by public or private landlords, are given severe blows. The authors convincingly show that substantial investment and subsidies are needed in the inner city, regardless of tenure, and that owner-occupation is simply not the panacea it is supposed to be to resolve the housing problem. This is a challenging book which deserves to be widely read and should generate interesting debates in the next few months.

Sebastian Loew



"One Touch of Nature Makes the whole World Kin" (this painting by Thomas P. Hall is one of the illustrations to *Paintings of the British Social Scene* from Hogarth to Sickel by E. D. H. Johnson (Weidenfeld £20.00). This beautifully produced book offers a readable analysis of changing styles and of the impact of foreign influences.

Martian measures

Patterns of Social Policy: An Introduction to Comparative Analysis. By Catherine Jones.
Tavistock £15. 0 422 77210 0

A book on comparative social policy would seem to provide a good read for those who are dedicated to this particular area of social investigation, and the forbidding grey cover of Catherine Jones' book only strengthens the impression that this is a volume to be confronted rather than savoured. But, as ever, appearances - and titles - can mislead. This is a brisk, spare and admirably lucid introduction to a field of study in which, as the author emphasizes throughout, the newcomer does well to heed the counsel of caution.

The soundness of this advice is well illustrated by the author's approach to a dauntingly complex undertaking. In her comparative examination of social policy provision in the US, France, West Germany, Sweden and the UK, she asks of selected services a number of questions: "What counts?" "What for?" "For whom?" "On what terms?" "By

what means?" "To what effect?" This "service by service/function by function" approach is, she writes, compounded of "idiot questions; the sort any visiting Martian must press". But this is no tale told by an idiot. On the contrary, the opening chapters of this book make up an impeccable illustration of the process whereby one reaches the conclusion that the most searching questions are often the simplest.

In her examination of methodology, then, the author does not flinch from listing for the reader the various awkwardnesses, contradictions and inconsistencies that this kind of research inevitably involves. Quite proper emphasis, for example, is given to such matters as cross-cultural differences in definition, the unreliability of material from official sources, the unavailability of subjective judgement, the difficulties involved in recognizing and controlling intervening variables; these - and many more - potential pitfalls receive pithy and uncompromising acknowledgement.

Given such a forbidding set of barriers, it is hardly surprising that the

Not-so-great debate

Curriculum and Assessment: Some Policy Issues. Edited by Peter Raggatt and Gaby Weiner.
Pergamon Press £2.95. 0 08 032676 5
Policy-Making in Education: The Breakdown of Consensus. Edited by Ian McNay and Jenny Ozga.
Pergamon Press £6.95. 0 08 032670 6

Here are two collections of articles to accompany the Open University course "Policy Making in Education". Both try to bring steadiness of vision to the confusion of educational politics over the last 10 years. They also continue the attempt to present educational policy studies in a digestible form for students of management in education.

The first book is the livelier read of the two. Salter and Tapper's opening piece gives an uncompromising account of the way Callaghan's "Great Debate" of the Seventies was stage-managed to exclude options other than those conforming to the approved ideology of economic primacy. This sets the public context of a series of documents which remind us how varied the quality of contribution to the curriculum debate could be: extracts from the House of Commons Education, Science and Arts Committee's report *The Secondary School Curriculum and Examinations* portray an ill-disguised contempt for the unsophisticated DES attempts at curriculum control. The civil servants' half-baked curriculum booklets stood no chance of gaining favour when competing against the better informed and more realistic productions of HMI and

the late Schools Council. Any regrets for the opportunity denied schools as a government department sought to establish the legitimacy of its power are tempered by pleasure at the details of local authority direct initiative which undermine the less: the language of ILEA, "Improving London Schools", has all the practicality and insight of a busy deputy head tackling the recent problems of what to do with half the fifth year. ILEA's method of identifying change was to listen carefully to teachers and the priorities their experience demanded. Similarly, Croydon attempt to relate schooling to changing population and economic circumstances demonstrates how creative local initiative can be, unfettered by narrowly-prescriptive national directives.

The companion volume is less balanced in its deployment of case studies and theoretical pieces. However, section on "The Collapse of Consensus" forms a definitive guide to the educational politics of enforced centralization, and repays careful reading.

It remains to be seen whether these books become statements of new critical concurrence. The breakdown of consensus has been with us since the late 1960s, and it is too early to talk of the full extent of change. Ensuing conflict would be anticipated but there is little evidence yet of alternatives ever taking any effective form.

Peter Law

lingo

Cubs and Brownies

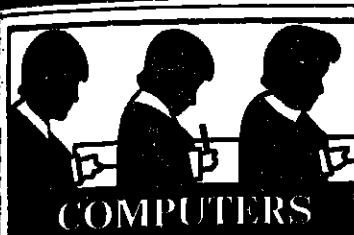
When Robert Baden-Powell published his *Scouting for Boys* in 1908, he intended the new youth organization to be limited to boys between 11 and 18. But many years later, when it was called the Boy Scouts, it was Wolf Cub Scouts that emerged as the favourite name.

Although no official records exist to account for this choice, it is known that Rudyard Kipling, author of *The Jungle Book*, had assisted Baden-Powell in the compilation of the *Wolf Cub Scout Handbook*. Kipling's novel *The Jungle Book* had been a success, and this was certainly the inspiration for the name. Moreover, Wolf Cub Scouts had adult leaders called "cubs" and "cubmasters", after the leader of the Wolf Pack in the book and the Wolf Panther, Mowgli's friend.

Meanwhile, similar agitation for separate junior organizations was being made by girls who were too young to be Girl Guides. What should they be called? At first, they were known as "Pawls", a name selected by Baden-Powell's sister Agnes. It was soon changed, however, that they deserved a name more than this, and in 1915 a name after the launch of the movement. More names were proposed, and they were Buds, Bees, Heather Buds, and the (after Heather Baden-Powell, the first year), Kittens, Doodles, and Mice and Rats. The winner, however, was none of these but Brownies, a name that came from the popular children's book *The Brownies* by E. Nesbit.

The final stage in the naming process came in 1967 when the Scout Association made a number of changes to its nomenclature. In that year, Wolf Cub Scouts were renamed Cub Scouts, and the original names suggested.

Norman Evans



Graphics, colour, sound

By Eric Deeson

Volumes four and five in Macdonald's beautifully illustrated Computer Club series cover Navigation and Command (£5.95 each). These slim, robust hardbacks include programme listings for the BBC Micro, intended to illustrate topics from the text. The books are just about accessible to top juniors, although whatever the user's age, fair patience is needed for typing the listings.

This program fits the whole solar system into your micro! You can see what it looks like with all the planets included, or zoom into just the planets nearest the sun - a flavour of the material, from *Comets*. Halley naturally makes the book unsuitable for UK readers or indeed anyone after mid-1986. *Navigation* is less exciting currently, but nevertheless offers outstanding coverage.

At first sight Robin McDonough's *First, Second and Third Microcomputing Books* (Edward Arnold £3.75 each) appear to be designed for junior children. They have colourful covers, fairly large print with lots of white space, and a jolly style. However, the small print of the blurbs indicates this trilogy is viewed as of potential interest to college level, and a closer look at the text shows that it's not easy going.

McDonough attempts a quite detailed course in BASIC programming with a few elements of computer awareness. It's hard to think in what real context in 1986 such books can be used. The basic involved isn't machine-specific, so cannot include all the nice twiddly bits young people so much appreciate (like graphics, colour, and sound); yet there are plenty of statements that common school micros won't let writers realize that no longer do basic strings have to be in capitals, and that tulips are allowed at the end of sentences?

Peter Duffett-Smith's *Astronomy*

with your Personal Computer is, in fact, fairly academic, and is more suited to the amateur astronomer than the computer freak. Published by Cambridge University Press (£8.95 and £25.00) it provides many thoroughly worked out and effective programs for deriving the necessary observational relationships required for effective observation. There are programs to convert between different forms of time measurement and coordinate systems; programs which deal with precession, refraction and nutation, and programs which help you find the position of a heavenly body at a given time.

There's almost a tradition that computing books cost £7.95 - a poor deal in many cases. The Robot Book by Richard Paws (Windward Press) offers outstanding value. £7.95 provides 200 A4 pages of excellent text supported by innumerable illustrations, many in colour. Paws meets a wide range of needs, from casual comment to lengthy constructional details. My only criticism is that the double spread is unduly restrictive - some subjects deserve a lot of detail but are cut short. However, the book deserves a place in class libraries; even at primary level it has much to offer,

Paper puzzles

CHILDREN'S LITERATURE

(Picture Puffin, £1.75). Another book to help with night fears is *The Bump in the Night*; the brave little linker who deals so well with the castle ghost makes a good role model (Anne Rockwell, Hippo, £1.75). This could be a good book to read aloud. *My Picture Books* speak to each other, for a wealth of detail, and for a wit which will make the story of Pa Pig's special treat for Ma Pig's birthday enjoyable to read aloud (Liz Underhill, Methuen, £3.95). Then there is an early Anno, not yet expressly mathematical, but showing his philosopher's wonder at the world in the story of a king who has to have everything giant-sized - including, in one stunning picture, the pliers with which his dentist tries to remove his tooth (The King's Flower, Mitsumasa Anno, Picture Puffin, £2.25). Kings are popular in picture-books; another title from Picture Book Studio is *King Bounce the 1st* (Helme Heine, £2.95); it has a fairly exiguous story, but very jolly, simple collage illustrations.

A pleasant aspect of picture-book design is its possible use, as in the two last examples, to develop the growing sense of humour. A gem for this purpose is *Alfalfa's Elephant*; there is so much in the simple-seeming pictures about the appallingly well-behaved Alfalfa and his unwanted pet to provoke shouts of laughter (Marilyn Sadler, Illustrated by Roger Bollen, Hamish Hamilton, £2.95). There is a particularly good joke on the last page; it is also almost at the end of *From Coming to Get You!* that Tony Ross springs his joke about the monster from outer space, and though parents may have met it before, young children will be delightedly obliged and relieved by it.

James, Oxford University Press, £2.50), an Australian story about a tough little 10-year-old who won't be pressured into hypocritical compassion, but makes an elderly friend when she meets a twin soul; this is funny, warm and essential reading for those who can't afford to be horsey. There are pictures of a sort, too, in Betsy Byars' *The Computer Nut* (illustrated by Guy Byars, Puffin, £1.50); they are actually computer graphics, a form of communication with a friendly alien in this witty author's first piece of science fiction; as with some of the picture books, the cream of the jest is the final picture. The Runaway has pleasant drawings by Reginald Gray, and also deals with a friendship between aliens, though both are earnings. English Derry on the run from social workers who might put him in care, and Indian Nachler ("I am not a rotten Paki... I'm a rotten Indian!"): a good book for human race relations (Gillian Cross, Magnet, £1.75). Initial suspicion growing into warmth is the theme of Jan Mark's *Trouble Half-Way* (Puffin, £1.50), about the way prim Amy begins to understand her lorry-driver stepfather as they travel north together, and how he gentles her into independence - the best learning book of a good batch.

There is also a children's version of the paranoid thriller, set in Leon Garfield's Victorian London, but with a flavour, this time, of Conrad more than Dickens (The December Rose, Puffin, £1.75); a good yarn, with some chilling moments, though, like most paranoid thrillers, demanding the reader to swallow rather a large camel. A book I found harder to swallow than I had expected was *Penelope Lively's The House in Norham Gardens* (Puffin, £1.95), whose deeply-pondered story of a girl living with elderly aunts and haunted both by her fear of their mortality and by visions which come from a relic of New Guinea ritual somehow did not take fire for me, much as I respected its complex response to cultural differences and kinships; here I feel sure the fault lies not with the book but with the reader.

Further articles and reviews on computers in this week's Extra, pages 33-36. Audrey Laski

Time for a change

Forward 100. By Ray Hammond.
Penguin £5.95. 0 140 97819 3.

The current issue of *Computers in Schools* carries an important article in which Peter Butt wonders how long A level computing examinations will survive in recognizable form after LOGO becomes widespread as a programming system. Ray Hammond, in this pivotal but sadly over-priced paperback, wonders how long any aspect of formal education as we know it will survive that change.

Hammond is of course far from being the first person to propose that schooling is under severe threat from the hardware/software systems that already exist, let alone those that are coming. (Though he is surely incorrect in claiming that Margaret Thatcher and Ronald Reagan foresaw this particular crumbling of the status quo when calling for a return to "traditional" values.) Seymour Papert is the best-known protagonist of the proposal, but Seymour Papert is almost fossilized in his views of half a decade ago and it's time for a change.

In some ways Ray Hammond provides that opportunity for change. His book, addressed to parents and teachers, is delightfully readable and well argued in its provocation of thoughts. He doesn't pull his punches either: "Any teacher who demands 'training' in the subject (computer usage), reveals a pathetic lack of interest in his or her own career and in the children, and a profound ignorance of world affairs. It is the duty of all teachers to familiarize themselves with computers and to study the implications of the arrival of artificial intelligence." Hammond is, however, too helpful. Some of his "modules" (chapters) deal in great detail with current hardware and software and thus are already rapidly sliding out of date.

The same comment applies to P. A. Patterson's little *Graded Questions in Computer Studies* (University Tutorial Press £2.80). This is much thinner and goes only as far as O level; there are lots more questions, however, but the "answers" are now hardly more than brief indications of what should be included.

Illustration from *The Robot Book* by Philip Paws.

IT impact

IT & FE. By Brenda Vincent and Tom Vincent.
Kogan Page £12.95. 0 850 38994 1.

Information Technology and further education, to give this slim volume its official but less snappy title, is a rather scholarly consideration of the roles of IT within FE. The authors have invested an impressive amount of work, if only in their almost Jackdaw-like collection of references. There are, the blurb-writer tells us, nearly 400 of these; some are adduced for such trivial reasons - including the repetition of facts entirely within the public domain - that one almost wonders if reference-chasing hid the real quest from the writers' grasp.

Indeed it is never entirely clear what the Vincents' quest is. They spend a great deal of ink on attempts to define IT but take the nature of FE to be self-evidently defined by the status quo. That is a great pity, for if IT comes to have any real impact on FE, the impact will certainly be to make FE unrecognizable.

The Vincents skirt on the edge of that fascinating idea, but no more. Thus they mention rather old-fashioned delivery systems like Plato and Cyclops, but don't explore the massive potential of even interactive video, cable, systems or videotex.

Again - "To be computer-literate may soon be regarded as a life-skill," they casually say near the end of the little book. Yet they don't really decide "So what?"

It is possible that the authors have been left untouched by the exciting pictures painted by Tom Stoner, for instance? Sure, they cite Stoner a few times, but though he provides the backbone of their shortest chapter - that on "the future" - we remain feeling that IT will certainly not rock the Vincents' view of the FE boat.

E D

Box of tricks

Head Teacher's Ideas Book for Unexpected Lessons. Edited by Joseph Harrison.
Foulsham £4.50. 0 572 01323 X

Every teacher I suppose, and not just every head, is likely to be faced with a "fill-in" lesson at very short notice. The sensible way of coping with it is to attempt something which has at least some relationship with the work which would normally have been covered. You start by asking the class what they have been doing - a process which, particularly for a head teacher, can be simultaneously illuminating and terrifying. After a few minutes of talk you can usually settle down to an approach or a topic which complements and enriches - or perhaps subtly corrects and balances - the work of the absent teacher.

This being so, it really ought not to be necessary for an imaginative teacher who has attained the rank of head to arm him or herself with an "Ideas Book", the very existence of which assumes the kind of fragmented teacher-directed curriculum which grinds to a halt when Sir or Miss disappears for half an hour.

However, realism and simple pragmatism dictate that any single one of us, whatever our principles, will sometimes reach for our own book of ideas, be it a poetry anthology or the Bible, and almost any collection of material is going to make a useful addition to the head's bookshelf. This one has a fairly predictable array of contents. There are class discussion topics - Pocket Money, Television, Honesty. There is a section called "Good Ideas and Who Thought of Them", which includes - you guessed it - fingerprints, Zip fasteners and cornflakes (surely it was God who invented fingerprints?). Most predictably of all, perhaps, there is a long list of "Days and Weeks to Remember". A rather curious section called "How to Write Verses" and a battery of Word Games complete the book.

My own feeling is that heads should keep this book in the cupboard where the cane used to live, reaching for it with the same feeling of guilt and regret. We could even preface its use with the words, "This is going to hurt me more than it hurts you."

Gerald Haigh



A health education poster from the 1940s, urging parents to have their children immunised - one of the illustrations to *Caring for Health: Dilemmas and Prospects*, by the U205 Course Team of the Open University (OU Press £5.95). This is one of nine titles offering a conspectus of health and disease worldwide, from biological, medical, historical, social and personal perspectives.

Who's who

A Parents' Guide to Education. By Maureen O'Connor.
Fontana £3.95. 0 00 6368069

A Parents' Guide to Education is outstandingly professional in its range of information, its organization and its presentation. The glossary is an invaluable set of definitions of what is what, who does what in education, expressed with disarmingly direct simplicity. (Writers of professional documents could take a few lessons.) How to explain to the overseas enquirer how the educational system in the various parts of the United Kingdom works? A page reference or two will do nicely for answers. Parents seeking information about nursery education, or higher education, or any stage in between, will find here what they need. Equally important, this book is a useful ready-reckoner for the current state of service. Cuts, numbers, local/central Government tension, there are plenty of clues and cool comments.

Schools could do well for themselves by spending £3.95 on this book as part of their resources for services to parents.

Norman Evans

BOOKS

Melanie Klein: her world and her work. By Phyllis Grosskurth. Hodder and Stoughton £19.95. The Selected Melanie Klein. Edited by Juliet Mitchell. Penguin £4.95.

Psychiatric reports on pupils that can occasionally filter back to schools from Child Guidance Clinics can present a bewildering variety of medical attitudes. Some read quite simply; others dip into an alien world of dreams, fantasies and obsessions impossible for the layman to follow. As often as not, such reports will come from psychiatrists who are disciples of Melanie Klein, an influential continental psychoanalyst living in Britain between 1926 and her death in 1960. Now Phyllis Grosskurth has written her biography, drawing on documents never before made public. It makes a fascinating back-drop to Klein's theories of child development, still so extreme they make even Freud seem ultra-cautious.

Put briefly, Klein believed that our main psychological problems begin in the first year of infancy. Swinging violently between love and resentment of the mother who both feeds and cherishes the baby and also of necessity sometimes frustrates it too, babies for their part become anxious that the aggressive feelings they feel might harm the person upon whom they know they are totally dependent. They are also furiously jealous of the parents' relationship with each other, particularly the sexual relationship, which for Klein is something babies are wise to from the moment of birth. Faced by so much internal rage and

In 1902

guilt the baby soon sinks into a "depressive position" coupled with "schizoid" fantasies involving violent images of mutilation, evisceration and ultimate destruction.

It follows that therapy is best started early and should be available for all

Infant furies

Nicholas Tucker on Melanie Klein



infants - the so-called "prophylactic" analysis that was visited on many children belonging to followers of Klein whether the said offspring showed any signs of disturbance or not. Although treatment takes place in a playroom it contains few elements of playfulness. Direct interpretations of what's going on do not mince words: two trains bumping together in a game will be explained as Mummy and Daddy banging their genitals together. If the child becomes anxious as a result this can help him or her towards expressing the basic anxieties that torment all of us but which, once in the open, at least become more manageable (though it is noticeable how many psychoanalysts patients mentioned in these pages seemed to need a succession of different therapists throughout their lives: Klein's own three children, for example, eventually clocking up eleven different analyses between them, including one each from mother herself).

Today no psychiatrist would dream of analysing their own children and other Kleinian ideas and practices have also dated. Her emphasis on the importance of the oral and anal stage in development, an inheritance from Freud, plays down other crucial happenings in infancy such as the development of speech. Contributions from

animal study, where an infant's attachment to its parents can be seen as part of an innate biological process, also pass her by - a pity, since some of her young patients' anxiety within therapy could have been because they were prematurely separated from their mothers. And her notion on what is a healthy food and things ignore the known limitations of all cognitive functioning at an early age.

Yet Klein was also something of a genius. She was right to move the stress in psychoanalysis away from the Oedipal Complex; she was also more successful than Freud in her theories about female development - something that soon comes clear reading some of her original papers gathered together by Juliet Mitchell in *The Selected Melanie Klein*. And while her theories are too strong for some, the violence of her imagery does get closer to the nightmare worlds of the severely psychotic and the compulsively paranoid than anything found in the more neatly compartmentalized patterns offered by traditional psychoanalysis.

The knowledge gained by Klein about such extremes of mental suffering was hard won. Chronically depressed herself as a young woman, she later found it difficult to stay friends either with colleagues or with her own children. One can see why she caused such negative reactions, given her domineering personality and general enviousness. The wonder is that she was also able to help so many patients to whom she showed genuine warmth. Those who want to explore this paradox further should read this fine biography, itself an exercise in compassionate though never uncritical understanding.

An elect group

The Golden Age Restored: The Culture of the Stuart Court, 1603-42. By Jonathan Furry. Manchester University Press £7.95. 0 7190 1850 0.

Reassessments and indeed the very existence of England's Stuart period begin during the reign of James I. It is possible to see traces of a beginning earlier still but, as Dr Furry points out, the changes that took place in this reign were profound and are typified by the traditional character, excessively variegated and ornamented, of the triumphal arches that were put up in London when the king first entered it and the dignified and Italianate style of the design of his catafalque.

The principal architect, in more than the literal sense, of this transformation was Inigo Jones. He was who led the Court and the aristocrats - until this period relatively insular and unaffected by developments on the Continent - into a new classical age of art and literature bringing England for the first time truly into line with the heritage of Greece and Rome.

This is essentially a book about the Court and the aristocracy: their pleasures and entertainments; their delight in building and in collecting treasures with which to adorn what they had built; their encouragement of literature - in particular one which played a

great part in re-informing their picture of themselves as an elect group that embodied all that was fine and noble. The "beloved people" were probably more divided from the aristocracy and Court during these 40 years than at any other time, largely owing to the royalist myths current. The concept of the "beloved people" - a sort of divine and part human - reaching its apogee in the catastrophic intensity in this period dictated the nature of the Court masques, the tone of the poetry and the painting and the nature of the interpretation of Church teaching, and these in turn increased the heady make-believe and intensified the isolation. James and later Charles I as well as Charles's elder brother, Henry, were passionate lovers and patrons of art and literature.

The contribution of Ben Jonson who worked in hostile union with Inigo Jones on many projects is discussed in detail. This examination of the arts, in particular the masques, marriage and funeral ceremonies, reveals that they were much more than mere pageantry. Dr Furry compares the attitudes current in the two reigns which were reflected in these displays and it becomes a little easier to see how it was that Charles and his courtiers could play on unaware of the doom they were bringing on themselves.

Katya Watter

Macaulay to Wilde

The Victorian Mirror of History. By A. Dwight Culver. Yale University Press £22.50. 0 300 03452 0.

In every generation people seek guidance for their own times through analogies from the past. We talk of the Augustan Age, and there was a short-lived campaign in the early 1950s to persuade us to see ourselves as New Elizabethans. The Victorians were no different, but were much more serious and analytical in their uses of history.

Professor Culver, with an enviably wide-ranging scholarship, traces these concerns through Macaulay, Mill and Carlyle. Thomas and Matthew Arnold, Newman, Browning, Ruskin, Morris and the Pre-Raphaelites, Walter Pater (who emerges as a much more significant figure than we might have thought) and finally Oscar Wilde, with whose conclusion that "to realise the nineteenth century, one must realise every century that has preceded it and that has contributed to its making" he ends his survey.

It is remarkably well-done, and the particular focus of this approach throws a quite new light on, for example, Browning. The author's insights also illuminate figures who are hardly touched upon in the book. What influences were at work on Burke-Jones, for instance, whose prolific 40 years of stained glass design began with a severe medievalism and ended with reflections of Botticelli and Michelangelo? Why, in domestic architecture did a new hybrid style creep in during the 1870s, abandoning both the moral imperatives of the Gothic revival and the rule-book of classicism for the sweetness and light of the "Queen Anne" style?

Tracing the shifts and changes of the spirit of the age and its feeling for the past through the work of representative figures, enables us to watch the Victorians coming to terms with their own times, with a purposefulness and determination that we have hardly shown in trying to make sense of ours.

Colin Ward



The third Channel 4 series entitled *The Making of Britain* now has its accompanying book: *The Age of Expansion*, edited by Lesley M. Smith (Macmillan £25.00 and £7.95). In this volume, 12 historians re-interpret the history of Britain from 1500 to 1763, following its transformation from a collection of small nations on the periphery of Europe into the world's greatest colonial power. Above, one of the illustrations.

The 'Blighty' end

The Great War and the British People. By J. M. Winter. Macmillan £25.00. 0 333 26582 3. Florence Nightingale and the Nursing Legacy. By Monica E. Baly. Croom Helm £22.50. 0 7099 3941 8.

That the national nutritional standard and, consequently, the standard of the nation's health (particularly at the lower end of the social scale) improved dramatically after 1939 is now one of the well-established paradoxes of the Second World War. The long central section of J. M. Winter's extremely nutritious book demonstrates in telling detail how 1914 saw the start of an earlier enhancement of health and life expectancy among many millions whose diet and general living conditions could hardly, in Edwardian days (that phantasm of "Golden Ages") have been more exigent and wretched.

Other sections assess the general and particular demographic costs of the war; and the weighty statistical evidence in a sub-section, "The Slaughter of Social Elites", supports the contention, much questioned recently, that "privileged groups" - the well-to-do

and the highly educated" - sustained disproportionately heavy casualties. For dedicated students of the war, especially of its "Blighty" end, this book will prove, I think, well high indispensable: not only is its commentary clear-cut and inclusive, but the dense statistical evidence supporting the arguments it adduces is most diligently amassed and cogently deployed. J. M. Winter has further enriched Macmillan's already impressive treasury of highly-expert First World War studies.

Monica E. Baly's book examines in close detail the way the Nightingale Fund (the nation's monetary testimonial to the nursing heroine of Scutari) was used to subvert nursing and midwifery training schemes. As with all Nightingale undertakings, given her inflexible and uncompromising nature, there was constant friction and acrimony - and the Fund's occasional realization in actual achievement - find a patient and dutiful chronicler.

Martin Fagg

Golden jubilee medal

This week the Youth Librarians of the Library Association award the winner of its Carnegie Medal presented annually for a standing children's book. The recent years have been for the most part given to a teenage novel by the year the selection panel has taken of recent criticism and has awarded the medal to Kevin Cross-Holland's slim book for seven nine-year-olds, *Storm* (Hodder, £1.95). This is a starkly atmospheric story, in the Banana Books series, ideal, rather like Keats's "Negative Capability", of reading unmediated by social or linguistic frames of reference. He recognizes its impossibility, but urges it no less forcefully. He finds allies too, from Baudelaire with his call for "impeccable naïveté" to unnamed students who've discovered the pleasure and enlightenment derived from lecturers who simply read to them rather than cover the blackboard with interpretive symbols.

But it's more ambiguous than that. Shattuck is certainly no conservative and he has an affection for the long line of the French avant garde. For those librarians who have released the imagination or merely allowed *la blague* to undermine the certainties of the academy, his enthusiasm runs deep. Here is one source of his discriminating pleasure in Baudelaire ("a universe of dizzying proportions and relations"), Valéry ("to watch so powerful a performance is to participate") or Proust and Maupassant. Wherever, in the end, is more of a proof as with Leary or Duchamp, he's less committed. When the imagination itself is conscripted for political ends, as with Aragon's submission of surrealism to

At a time when there is much debate as to whether music colleges should exist to turn out star performers or all-round musicians, the Shell-London Symphony Orchestra Scholarship - 10 years old this month - is one of the few awards to place equal value on both the soloist and the orchestral player. Most young musicians know the best that winning a competition can give to their career, but what does the Shell Scholarship offer the hopeful young player with his or her sights set on the concert platform as a soloist or section leader in one of the top orchestras? I talked to Julia Girdwood, the winner of the first Shell Scholarship for woodwind, to find out how her career has progressed. She comes from Kircaldy, Fife. When she was 16 she saw an advertisement in the local paper for the competition and applied for an audition, with a friend for moral support. Although nowadays the Shell Scholarships are recommended for their informal, workshop-style selection methods, she had to undergo a formal audition with Antony Camden, principal oboe with the LSO. The final was held in the old Guildhall School of Music with the Guildhall orchestra (not the LSO), and Julia won the competition with a Mozart oboe concerto. "It must have been very boring for the audience - eight of us all playing the same piece."

The scholarship has opened up a world of new contacts that would have been impossible for a young musician from the provincial north to establish for herself. The money has been useful, of course; she has spent the last of the £3,000 on a new oboe. The vital link with Antony Camden and the LSO led to a place at the Guildhall in 1982, and became even more important when Julia made the decision to concentrate on orchestral work rather than aim for a career as a soloist. She particularly enjoys the life of a session musician, and has played with all the major British orchestras. She frequently joins the woodwind of the LSO, most recently at the Bernstein Festival. "Touring is fun" she says "so much better than the lonely life of a soloist." She has travelled to the US and China with the LSO, and plays

Mexico way

"We talk so grandly... about living in Mexico. All it amounts to is a little individual looking at a bit of a tree and trees, then looking down at the page of his exercise book." Lawrence's splendidly deflating warning to Morning in Mexico (Penguin £2.95) is of course instantly followed by a more substantial recommendation. For a sprawling but interesting treatise readers might look at a recent visit to Mexico South America by Tehuantepec by Kegan Paul (Penguin £7.95). In the same series later R. L. Stevenson's *The South Seas* (£6.95) - a beautifully illustrated account of Pacific island life.

Emrys ap Iwan School Publications
"The Industrial Scholar"
price £2.00 & available in the school, in Aberystwyth.

The opposition party

By Tom Deveson

The Innocent Eye. On Modern Literature and the Arts. By Roger Shattuck. Faber and Faber £15.00. 0 571 120 71 7.

It's always refreshing to hear a critic in a fit of criticism against criticism, even more a professor professing doubts about professors. Roger Shattuck, Professor of French at the University of Virginia, is very uneasy at the colonizing of literature by post-modernist theory and triumphalist deconstructionism. He fears that literature, deprived of autonomy, is becoming a branch of social science and an "endlessly renewable pretext for scholars to hold conferences... and gloss one another's works into powder". These elegant polemical doubts surface throughout his collection of essays, mainly on French literature and painting, but they're not mere anti-progressive grumbling. He has an eye for an ideal, rather like Keats's "Negative Capability", of reading unmediated by social or linguistic frames of reference. He recognizes its impossibility, but urges it no less forcefully. He finds allies too, from Baudelaire with his call for "impeccable naïveté" to unnamed students who've discovered the pleasure and enlightenment derived from lecturers who simply read to them rather than cover the blackboard with interpretive symbols.

But it's more ambiguous than that. Shattuck is certainly no conservative and he has an affection for the long line of the French avant garde. For those librarians who have released the imagination or merely allowed *la blague* to undermine the certainties of the academy, his enthusiasm runs deep. Here is one source of his discriminating pleasure in Baudelaire ("a universe of dizzying proportions and relations"), Valéry ("to watch so powerful a performance is to participate") or Proust and Maupassant. Wherever, in the end, is more of a proof as with Leary or Duchamp, he's less committed. When the imagination itself is conscripted for political ends, as with Aragon's submission of surrealism to

Stalinism, he's eloquently dismissive: "his wriggling... were despicable." This observation comes from a fascinating account of the Writers' Congress in Paris in 1935 where the anthem and responses committing the writer's art to serve the once and future socialist state swelled so loud that Pasternak's call for a poetry that "will always exist down in the grass... too simple a thing to discuss in meetings" was drowned. These doubts about the use or effectiveness of the arts reinforce Shattuck's uneasiness at their fate in the university.

The use of a tradition is another matter. Shattuck is adventurous and convincing in tracing unexpected family trees, from classic ancestors to subversive progeny. He draws, for instance, a line from Flaubert's letters describing the workings of his imagination through Taine's theory of *hallucination vraie* to Breton's surrealist manifesto. Or he traces the link between a passage in Baudelaire's *Salon de 1846* and the development of Seurat's experiments into abstract painting. The names Shattuck brings into these genealogies cover the centuries, the arts and the sciences; indeed his index from Apollinaire to Zola is in itself a kind of skeletal *Guide Michelin* to French culture. What stops the book being mere name-dropping and gives it a plausible unity is his recurring preoccupation with the themes of imagination and originality.

Nerval said that the human imagination has produced nothing that isn't true. This is an idea that Shattuck uses to good effect in elucidating Magritte's work, for example, but behind it lies an older idea, that of universal analogy or of Baudelaire's *correspondances*. The book traces, through different essays, the gradual shift in sensibility across a century, from the sense of rupture that different parts of the world connect mysteriously with each other and with us, to the sense of rupture that challenges and inspired the great founders of modernism. But that fragmentation itself is part of a tradition that in some ways as old as the mind itself, the very

continuity of knowledge that the encyclopedists celebrated was set out in the randomness and illogicality of alphabetical order.

Diderot, indeed, is a key figure here, as he was for Lionel Trilling in describing similar movements in our culture. His paradox of the actor, who plays all characters by having none himself, foreshadows ideas both in existentialism and in psychoanalysis about the ways in which we convince ourselves that we've become the varied roles that we adopt (what Henry James called "the historic character"). It's the eponymous hero of Diderot's *Rameau's Nephew* who "personifies a man driven by his limited gifts and insecure social status to practice originality for originality's sake". The drive to make it new in the arts has begun to bring diminishing returns: attitudes of complacent alienation, self-destructive objects which discredit art itself as an activity, novels of the "metaphysical picaresque" which assert the sovereignty of language and read like endless reenactments of *Don Quixote* without Sancho Panza. On all these matters Shattuck's strictures are cogently expressed, with a tellingly sharp eye for the apt quotation. He signals the perils of formalism with a line from Valéry's notebooks. "Civilization sustains itself only by a certain barbarity." But citing elsewhere Artaud's boast "I'm not mad, I'm a fanatic", he reminds us what the canonization of fanatics has meant in recent history.

This is a thoughtful, readable and morally impressive book. It could perhaps be enriched by extending its comparisons to the field of music: Debussy's "mysterious correspondences between Nature and Imagination" come to mind, as do Stravinsky's use of tonality and polyrhythms in *Petrushka*, cousins of the experiments of Apollinaire that Shattuck celebrates. But he does honour to literature and arts; and, critic and professor as he is, he belongs with Balzac to "the opposition party which is called life".



Ten years after

Philippa Davidson talks to Julia Girdwood, winner of the first Shell-LSO Scholarship

regularly with the European Community Youth Orchestra, which contains no fewer than six Shell Scholarship winners, including last year's winner, flautist Karen Jones.

Being on call is not easy. "It never does to turn down work, even if you are tired. Sometimes a piece has to be learned at short notice. The phone rings at midnight and there is a new work for the next evening."

The fee for a session is surprisingly low, about £50-£60 plus expenses. Film sessions pay more, but are harder to come by. There is not much chance

of a social life when you have to work in the evenings, and marriage would be out of the question. "Many young musicians don't realize the pressures, she says, freely admitting that there may come a time when she will consider teaching or an administrative job (she has worked in the ECHO office) if things get difficult.

The final of the tenth anniversary Shell Scholarship, this year for string players, will be held in the Barbican Hall on June 17, starting at 7pm.



England's manager Bobby Robson

Television

Footnotes to Mexico

"History is so extravagant in Latin America that it beats fiction," Carlos Fuentes told *Bookmark* (BBC2; June 7), dismissing the label of "magical realism" applied to his work and repeatedly protesting that one or another incident from his novels was based on a real event. "God how little I make up!" The preface was the publication of Fuentes's *The Old Gringo*, but with ITV adopting "Mexico 86" as a cover for everything (including, improbably, *The Best Little Whorehouse in Texas*), BBC2 may have timed *Bookmark* to show that there was more to Mexican culture than soccer and tortillas.

There was enough magical realism, too, among the old gringos back in the BBC and ITN studios to transmute any defeat. "The only thing wrong was the result," a commentator concluded after Northern Ireland had gone down to Spain, and Bobby Robson's assertion that "we're still the best team in the group" on June 7 was warmly applauded by Brian Clough. "That was a very good interview," he said. "The judgement showed less concession than recognition of the English side's talent for felling a good bedtime story, regardless of events on the field."

Five o'clock Mexican time is cocotime in London, so football fans will be the ones, over the next few weeks, who get to work late and red-eyed. Their passion is a peculiarly frustrating one, and not only because the home teams are currently failing to produce the results so confidently predicted by the television commentators. As often as not, goals seem to come almost by accident, while one well-coordinated attack after another breaks against the defence. No wonder players commit fouls and fans go on the rampage. There is sometimes truth in the fiction that nothing went wrong except the result.

All other television dramas being treated as footnotes to Mexico 86, we got Kane and Abel (BBC1, June 3, 5

and 6), the adaptation of Jeffrey Archer's novel with Sam Neill and Peter Strauss doing their best, in that order, as the leading characters. It was remarkable above all for being simultaneously utterly implausible and highly credible. Abel was surely alone in failing to guess who put up the money to save his hotels, and when one of these bitter enemies fathered a son, and the other a daughter, millions of viewers must have known what would happen. The first law of the genre states that the author has only to propose the improbable for it to become the inevitable, and this predictability lets you adopt the appropriate emotional stance, lie back and enjoy it. Why not? No one has yet proved it makes you go blind.

However, one hopes that Jeffrey Archer and his Conservative colleagues realize that, outside such fantasies, people's lives are governed by very different rules. TV Eye (ITV, June 5) partly blamed the Government for the collapse of the Cornish mines, but the programme's case was chiefly that there is a huge gulf between the Kane-and-Abel world of the City and that of the miners. The price of tin is an abstraction, arrived at by bargaining in an international game, but the outcome involves the survival of a community and its way of life.

"Without understanding the market, it would be easy to say: 'Well, this is a bit of a casino.'" Quoting this comment on the Futures Market, First Tuesday (ITV, June 3) could have taken up the challenge to explain why anyone should consider what Mick, Bob and Nigel get up to at the Royal Exchange is more meaningful than roulette. It didn't. And when Part Two revealed that bingo involves watching balloon dancers with funny wigs and no blazers, I waved my yellow card and switched off.

Robin Buss

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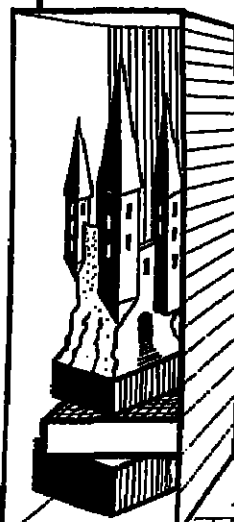
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The 1981 launch of the micro-computer towards every one of Britain's schools was accompanied by a wave of rhetorical enthusiasm and a flood of rhetoric for its vocational significance. Kenneth Baker, the new Minister for Information Technology, typified the political mood of the time. He claimed that the "kids of today" urgently needed modern, up-to-date skills, analogous to those skills that had gained their ancestors employment in a previous era: "And that is the reason why we've pushed ahead with computers into schools. I want youngsters, boys and girls leaving school at 16, to actually be able to operate a computer."

That optimism for the vocational significance of the computer permeated into many of the two million or more households which subsequently acquired computers, and largely caused the unprecedented growth of Computer Studies as an examination subject. A recent article in the *Times Educational Supplement* ("Home Truths", 7.3.86) reported that 33 per cent of households with children now have a home computer, and welcomed this as a "major step towards the universal computer competence required by the coming information society".

The unquestioned belief in the vocational significance of information technology also deeply affected both the thinking and the publicity associated with the two key innovations in vocational education: the Youth Training Scheme and then the Technical and Vocational Education Initiative (TVEI).

The publicity at the initial launch of the YTS often attempted to associate the scheme with the new technologies "at the forefront of employment creation". This emphasis on the vocational significance of information technology (IT) has continued in the same vein with the advent of the two-year YTS. The televised publicity drive for the two-year scheme even includes an "employee" of the world's largest computer firm beckoning a "typical youth" into their organization.

Similarly, the drive behind TVEI depended to a large extent on its perceived links to new technology and to vocational information technology. One of the key factors behind the initiative was the continuing emphasis on "high-tech" industry in the early 1980s. This in turn led to the belief that future employment prospects will be greatest in IT based industry and commerce.

This is a belief which requires thorough and critical investigation. The links between information technology in education and information technology in employment have never been

Jobs on the line

Jerry Wellington on a project which seeks to investigate the connection between computer education and the world of work

fully and critically examined. There is simply an implicit and unquestioned belief in the minds of many people (parents, children, teachers and policy-makers) that IT education at any level will make its recipients more employable. That belief has provided the main impetus for much of the information technology education in schools, colleges and TVEs (Information Technology Centres).

But what are the "skills" needed for Britain's "technological revolution", and at which level are they required? How can Britain's education and training systems best provide the human resources needed to develop both our IT industry and the use of IT in industry?

The "Skills for the Future" project, based at the University of Sheffield and funded by the Manpower Services Commission, has set out to explore both these questions. The overall and most ambitious aim of the project is to create greater liaison between schools, youth training, higher education and employers in the field of information technology. A central theme is that no area can be studied in isolation. The broader context of other educational provision and the world of employment are vital to a proper understanding of each area.

The specific objectives of the project are:

- to determine the needs and requirements of a wide range of employers in the area of information technology
- to compare the range of IT skills and competencies required by employers with the current provision of education and training at school level and above
- to suggest a more coherent and responsive approach to information

technology education and training in the light of the study of IT in education and employment.

Several different approaches will be followed in collecting data:

- a study of the relevant literature and existing research in this field
- initial interviews with a sample of employers
- a questionnaire designed for national distribution to a much larger sample
- in-depth interviews and case-studies, both in education and industry

Electronic, as well as conventional methods, of acquiring information will be employed. The Times Network for Schools, for example, should prove valuable in publicizing the project, collecting data, distributing some form of "electronic questionnaire" and of course in disseminating its findings. One of the interesting side issues include a comparison of electronic versus traditional methods in research of this kind. How, for example, will the response rate from a postal questionnaire to employers compare with this response to an electronic version? One of the project's more exciting prospects will be to explore the potential of an interactive, electronic questionnaire.

The project has set itself the target of making contact with 1,000 employers. Initial interviews with a sample of employers will be followed by a postal survey, and then at a later stage, detailed case-studies will be made of a much smaller sample. Already an excellent, very welcoming response from industry has been received, both locally and nationally.

Full publication of the project and dissemination of the information collected is seen as a crucial aim. Indeed, the project's objective is to provide readily accessible information on various sectors of education and employment, thereby improving liaison between them and enabling their work to be seen in a wider context. The potential and efficacy of electronic networks can also be explored at this stage. It is intended that the project should prove useful and relevant to all those involved with education and employment in the area of information technology.

The project team includes three teachers who have been selected by advisory staff on the basis of their contribution to information technology education in their own area. In addition, the project has its own research fellow with extensive experience in projects of this nature.

If you would like to be kept informed of the project as it develops, please contact Jerry Wellington at the University of Sheffield, or through the Times Network for Schools (TNS) on mailbox, TCD100289.

World Congress

continued

dent must respond within a pre-determined time-interval or be considered to have failed the item.

Not all North American IV is so firmly entrenched in the behaviourist tradition. Sheldon Renan's popular *Buried Treasure* is an adventure game on videodisc: \$500,000 of gold was buried somewhere in America a few years ago. The clues to its location are spread around the videodisc, some even buried in the credits. So far, the gold hasn't been found, but Renan's disc is a feast for the senses, and his book a handsome complement. The video sequences can be reprocessed by children wanting to reconstruct their own adventure games with less exotic rewards.

Renan's latest project is called *The Body Disc*: triggered by an intriguing videodisc trip through a jeep engine, this ambitious project aims to provide "a visionary journey through inner space". Renan's skilful production and artistic values have already interested several international science museums - essential if it is to achieve its \$4 million budget. It may form a benchmark in the development of aesthetic and educational museum education.

The exhibition area clearly illustrated the rapid convergence of laser-disc technology. Compact discs can be used as a convenient form of read-only memory (CD-ROM), for example to distribute up-to-date versions of databases to people who would normally have to search them on-line. Philips, Sony and Hitachi make CD-ROM drives, a distinct from compact disc

the drive with a micro - options include IBM PC and compatibles, Apple and Atari.

Stepping Stones Learning Systems were showing *The Electronic Encyclopaedia* - over 9 million words of text from Grolier's *Academic American Encyclopaedia*. Twenty volumes consisting of 30,000 articles thus occupy less than one-fifth of the storage capacity of a single 4.7-inch compact disc.

In conjunction with Activenture's Knowledge Retrieval System software, this massive database can be searched in a few seconds for any keyword or combination of keywords. The simplicity of instructing such searches puts most database software to shame. Words or phrases can be searched for alone or in combination with other words, with or without conditions about their order and proximity. Thus you can search for the phrase "blue whale"; or for all occurrences of "blue" near "whale" - where you define the nearness; or even eliminate occurrences of "whale" that are not preceded by or near to "blue".

At each stage, the system lists the number of records found, offers to display the titles and/or full text, and allows you to save the search to floppy disc and/or print the text selectively or in full. On the simple searches that I tried, search times were barely noticeable, but even complex searches apparently never exceed 30 seconds. The software costs \$199 for the encyclopaedia with updates costing \$25 annually.

The next generation of CD-ROM - a medium dubbed CDI (Compact Disc Interactive) - was also on display. A different CD-ROM drive, connected this time to a PC with hard disc, searches a CD that carries pictures and

search for "blue whale" pulled out not only relevant articles but also a digitized picture of the tail-fin and whale song in stereo through the loudspeakers. Once the technology has progressed to a state where digitized pictures can be pulled off the CD at 25 to 30 frames per second, CDI could provide moving pictures with digitized sound and in a manner that may rival the 4 and 12-inch laser discs of today. Although the CD could not hold as much video material, the greater convenience, standardization and cheapness of the CD players could pose a serious threat to the current bulky analogue laserdisc formats.

On the overall effect of technology on education, there was a marked difference of opinion. Tom Storer of Bradford University was on the pessimists' side. He predicted that by 1995 children with home computers will learn to read and write almost as fast as they learn to talk, and that 10 years later 12-year-olds will master calculus.

Education for the information society must, he argues, aim to produce a creative workforce - adaptive, entrepreneurial, interdisciplinary - a marked contrast to the disciplined, punctual, conformist, specialized - demanded by the industrial society. Home, according to Storer, will be the place for learning, not being for play.

A sombre contrast was drawn by Joseph Weizenbaum in his address "Beyond euphemism". The real problems of education include the continuing of children to communicate with each other in their mother tongue; literacy - and to affect more than half of US teachers; absenteeism; drug and discipline generally - armed police officers patrolling high school corridors. To these problems, according to Weizenbaum, the authentic pursuit of computer education

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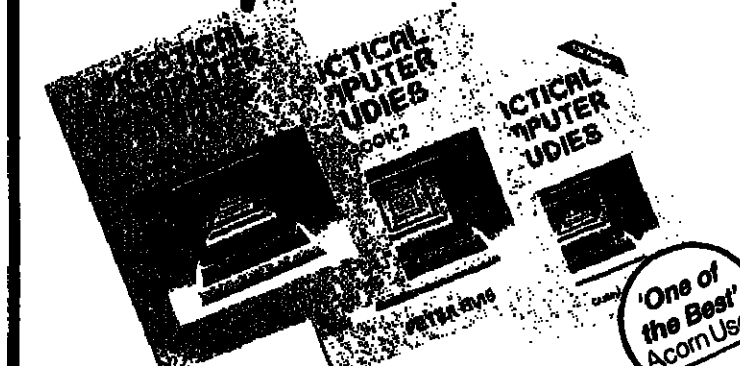
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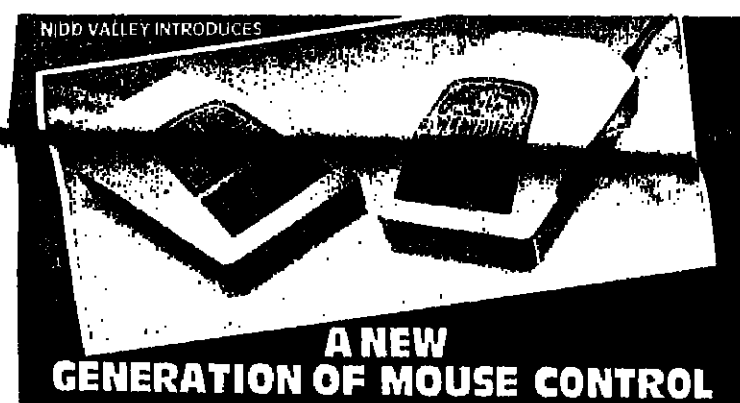
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Of the three computer makers who enjoyed subsidised supply to schools by the Department of Trade and Industry in 1982, only one, the smallest, has prospered. Research Machines Ltd, the company founded in the late Seventies specifically to market educational machines, remains the only major supplier of school microcomputers to avoid near-bankruptcy and take-over.

The worst news of this year has been the virtual demise of Sinclair Research. After suffering massive losses in the home computer market (and even larger losses in the separate company which made the CS electric trike) Sir Clive Sinclair has been forced to sell his computer manufacturing operation – and the rights to the name "Sinclair" – to Amstrad, an aggressive marketing company who have scored spectacularly with home computers and with the old-fashioned but low-priced PCW8256 wordprocessor package.

It is still unclear what the future holds for Sinclair products and existing owners. Although the number of schools using Sinclair computers, usually the popular ZX Spectrum, is far less than those using the BBC series, produced by Acorn, and RML machines, the computers are installed in an estimated 20 per cent of primary schools and, having made an investment in both hardware and software, i.e.s are now worried in case the change of ownership lowers the quality of service and after-sales support. Amstrad's attitude doesn't offer much hope. "I should imagine we'll continue to support schools, but I wasn't aware that schools used Sinclair computers until you told me," said the normally dynamic boss of Amstrad, Alan Sugar, when I asked him about Sinclair's future in education. "We're obviously keeping the customer support centre going and I suppose that will help."

Amstrad has now "dumped" 50,000 unsold Sinclair QLs and Spectrums on overseas markets and this suggests that new products bearing the Sinclair brand-name may be soon available. Certainly, the new Amstrad IBM-compatible PC due out next month at a shockingly low price of £399, will also carry the Sinclair name.

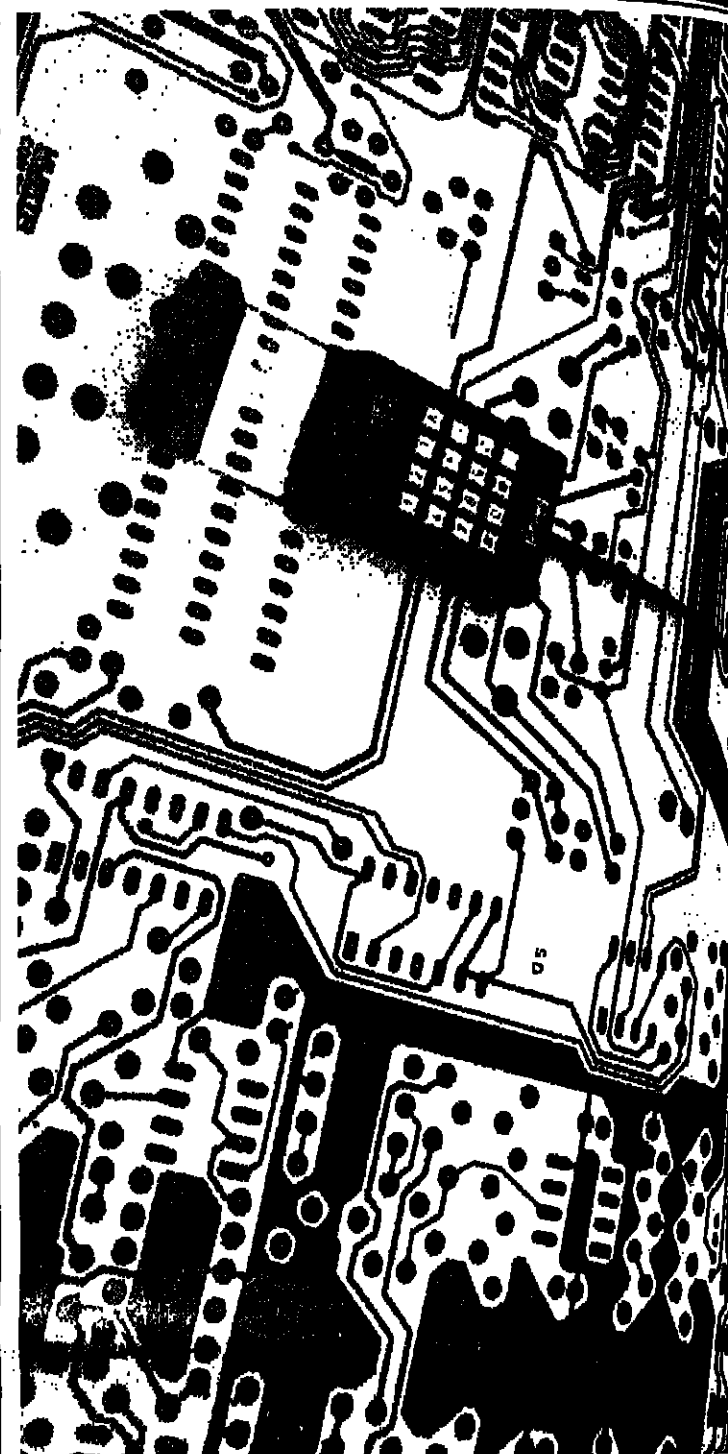
Amstrad's strength is built on the "warehouse" philosophy best described as built-in-cheap and piled-up-high. The company are interested in volume markets, not specialist fields, and it is easy to see the contradiction between the company's main thrust and the sort of detailed and dedicated support demanded by educationists. As an example of Amstrad's future plans, the company has recently announced that following its success in selling hi-fi car radios, it will also market computers it is now about to hurl itself at the massive "white goods" market, the area which includes washing machines, fridges and tumble-dryers and which is at present dominated by Italian and German mass-producers.

On the face of it, the position of the BBC microcomputer and its manufacturer seems healthier now than at this time last year, but since Acorn's collapse and subsequent take-over by Olivetti of Italy information about the long-term future of Britain's best-known supplier of school microcomputers has become harder to come by. Olivetti bought a controlling stake in Acorn because the multi-national hoped they were buying educational technology which could be used to give them a major hold on the educational markets of Europe and the rest of the world. Sadly, this proved to be less than straightforward.

"The Acorn (BBC) standard was a hardware standard which proved to be unwise to Britain," David Maroni, Olivetti UK's Director of External Relations told me. "We feel that this standard is hardware dominated and, for that reason, can't be exported easily to overseas markets."

Although Olivetti put a brave face on the future of their acquisition and point out that Acorn has been able to turn around from being a loss maker to a company which is more or less breaking even, this has been a blow to the company's future. An indication of the Italian company's attitude became apparent in February when Vittorio Levi, Olivetti's International Director, announced in Venice the availability of a new Olivetti product for education called ClassNet. This is a product for secondary-level education which is based on Olivetti's range of IBM-standard personal computers.

"We are convinced that, other than in the UK, it is the IBM software



The As and others

Acorn, Amstrad, Apricot, Apple, RML, etc. Ray Hammond reports on the "splintering" computer market

standard which will dominate education at a senior level," said Signore Levi at the time of the launch.

What is significant about the Olivetti announcement is not the product – a rather uninspired network which gives the teacher "control" over the work undertaken by pupils – but the fact that it was developed in the company's R&D facility in Milan, despite the fact that the company had recently spent over £15 million buying what they then thought was Europe's premier company in educational computing. Answering a question about why the educational product was not developed in Cambridge, Levi referred again to the incompatibility of the basic hardware Acorn product with that used in the rest of Europe. Olivetti are now looking to Thomson Electronics of France for a joint venture which will lead them into the schools of Europe.

Since the beginning of the year Acorn have announced the "Master Series" of BBC microcomputers and, in its 512K form which is due to become available in July, this machine can emulate IBM-PC performance while still retaining compatibility with much of the software already developed for older BBC micros.

"The Master Series has been a huge success," claims Valerie Holt of Acorn. "Sales are well ahead of our expectations and if the 512 does as well as the Turbo version, the first upgrade we made available, we will be very pleased."

Commenting on Olivetti's global attitude towards Acorn wars, Holt points out the difference in perspective between the two companies.

"We feel we're doing very well in export, but what would seem like a big

order to us wouldn't seem worthwhile to a huge multi-national like Olivetti. We've signed a million dollar order with Canada, a half-million dollar order with Hong Kong and we're also stung in Holland and Australia."

But Valerie Holt is sufficiently realistic to acknowledge Acorn's severe difficulties. "To say things are rosy again for us would be an overstatement. We've been through a very difficult time of reorganization and we lost a lot of staff. We're still recruiting, but things are getting better: at least people know who they're supposed to report to now."

Olivetti are loathe to comment on Acorn's future – they claim that Acorn is autonomous – but unless the market for educational computers within the UK becomes significantly more buoyant than it has been for the last year, it is certain that the future for a company trying to recover from near liquidation must remain under review.

But what of the honourable exception to this chaos? Research Machines or RML as they are universally known, remains, as always, modestly content. For the last couple of years they have been offering schools IBM-compatible software which has been written using the MS-DOS operating system. As the only company to specialise consistently in computers for education, they are confident of a healthy future.

I was at a meeting recently on the New Examination. Drawn like the cast of an Agatha Christie thriller to a mysterious and draughty room in north-west London, we were soon plunged into the mystery – the Great Computer Studies Enigma. It was a spine-chilling experience, I can tell you.

The trouble started with the Secondary Examinations Council, the people who came up with the National Criteria for this New Examination. Some of us thought that an examination council was ok as long as it stuck to the business of examination syllabuses and didn't get too deeply into badger-baiting, the price of firefighters or telling computer studies teachers weren't teaching computer studies. The puzzle – the Great Computer Studies Enigma – is how did paragraph 1.2 worm its way into the National Criteria for Computer Studies?

Paragraph 1.2, I will not quote it in full, says: "Computer Studies will be both a service subject which provides basic skills and expertise to teachers

Great Computer Studies Enigma

and students in other areas of the school curriculum and a subject in its own right." It looked quite innocuous when I first read it. "Service subject" is a familiar, kindly term. We often talk of mathematics being a service subject to science and of English being a service subject to everybody. It means, for example, that the skills and knowledge which children acquire in mathematics lessons help them in their study of physics and biology.

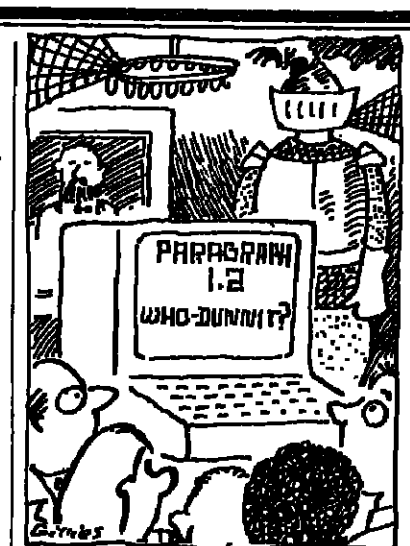
Now look at paragraph 1.2 again. It doesn't quite say that. It talks of providing skills and expertise to teachers in other areas of the curriculum, a totally different business. Well, the introduction of this New Examination has been a bit rushed, of course, and when everyone's in a hurry there is a Good Chance of Silly Enterprises slipping past our guard.

Now don't get me wrong. Computer

Studies has bred a hardy race of men, though not many women, who, toughened by years of teaching a subject they know nothing about, have led their colleagues from other departments up the early, yet treacherous, slopes, striking vipers from the track and steering clear of precipices that might well have claimed a proportion of the unwary. Despite this, there are some, would you believe, who would give the entire subject the elbow; shoot the sherpa, as it were. I'll have no truck with them. Nevertheless, I come out in a rash when I read of the Secondary Examinations Council requiring those involved in the teaching of Computer Studies to regard their responsibilities as including an in-service education role within their schools; formally require them, you understand, for the National Criteria are to be swallowed whole, not picked about like a piece of

Kentucky Fried Chicken in a search for the edible bits.

Of course, there is no reason why Computer Studies teachers should not Give Computing Support to English (and other departments). Teachers from all disciplines need help to Gain Confidence, Skill and Expertise in the use of computers. I am perfectly happy for heads of Computer Studies to Give Counsel, Support and Encouragement in this, but please, let's leave it at that. Let's not formalize the Computer Studies Department's in-service role (if it has one) nor talk, as job advertisements so often do, of a head of Computer Studies willing to take the lead in Guiding the Curriculum and Similar Exercises. If we do allow the role to be formalized, then the Computer Studies Department will continue to be seen as the natural source of wisdom on anything to do with compu-



ters. That responsibility is best discharged by a senior teacher or deputy, backed by the i.e.s. advisory service.

Bob Sheed

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EXTRA

First find a computer, then...

Barney Fairbrother and Keith Robins offer guidelines on how to introduce a micro into a primary school

Much has been said about the "nuts and bolts" of computing in primary schools. But the problems that confront schools as they succumb to the pressures to take on microcomputers are not so much connected with the hardware or software aspects of microcomputing as with their management. Often the well-publicized efforts of those teachers who introduced novel applications of computers into primary schools overshadow the problems of those who must follow in their wake. For their task is no less arduous but the prestige and kudos that the efforts of the pioneers attracted is not there to support or propel them.

With a national average of less than two computers per primary school it is vital that when schools do have access to machines that they make effective use of this expensive resource. Yet many teachers and headteachers are aware that the hardware in their school is not being used to its full potential or

prevent theft then arrangements must be made for it to be secured.

- Order, or otherwise acquire, a suitable trolley for the computer. (Teachers will not be enthused with the equipment if they have to transport it item-by-item to their classrooms and then connect up all the various components of the system with a multitude of assorted cables.)

A suitable trolley is wide enough to allow pupils to sit side-by-side in front of the computer; has a monitor-shelf which is well-supported as well as deep enough to take a monitor safely; is an appropriate height for the pupils who are likely to use it; will house all the present components of the system plus possible additions such as printers and disc drives.

- Order necessary accessories and consumables for your system. Spare cassette tapes or floppy discs will be needed. Fanfold paper is advisable if you are lucky enough to be able to afford a printer. It is likely that you will need to obtain a multi-way adaptor as few primary school classrooms have more than a couple of mains outlets but a computer, monitor, disc drive and printer together may have as many as four mains plugs. Make sure that all the interconnecting leads for the various components of the system will arrive with the computer - they are often extras!

- Find out whether the authority insures computer equipment and what the terms of the policy are. Will the equipment still be covered if teachers take it home for the weekend?

By the end of the first day on which the computer arrives:

- Remove items from their packing materials but do not discard the packing materials at this stage. They may be needed to return defective items.
- Check that there is no obvious damage to the equipment and record the details including serial numbers of each item in the school inventory. Mark each item with indelible security paint.

By the end of the first month after the computer has arrived:

- Ensure that you have mastered the basic skills needed to use the system. You may be able to learn these from the manuals that come with the system but these are notoriously obscure. It is probably more appropriate to attend a course.

- Try to locate someone in a local school with similar equipment who may be able to help with SOS calls.
- Find out the name and phone number of the person in the authority responsible for computer education. Is there an advisory teacher in the authority who can support you?

- Find out what, if any, software your authority is able to supply free and get copies of it. Find out which pieces of software other schools have used successfully. Investigate the existence of courses that will give you an overview of the primary software available. Make sure that you are aware of the different approaches that different types of software imply.



- Find out what the appropriate procedure is if equipment becomes faulty.
- By the end of the second month:
- Decide which pupils and teachers are going to have access to the computer. Deciding that all the pupils in school should have access when only have one system is likely to be disastrous. Focus your resources on a small number of pupils in specific pieces of information from a database; some pupils have used an adventure program; some pupils can use a graphics program creatively;

- Assess the adequacy of the in-service training you and other teachers have received and act appropriately.
- Determine whether there are any organizations or people that you have not contacted that might be useful, such as: other secondary and primary schools; Further Education colleges; local businesses; parents; i.e. a support services; national associations such as MAPE and BLUG.

- Find out whether there is any possibility of improving or adding to your hardware. If you have not got a disc drive consider it to be a first priority, followed by a printer. Always seek i.e.a. advice before ordering.

First find a computer continued

been achieved. For instance, which of the following are true:

all pupils in the class have had fair and equal access to the system; all pupils enjoy using the computer; all pupils have acquired good habits with respect to handling the hardware; all pupils have acquired basic keyboard skills; most pupils have learnt to load and run a program; most pupils work co-operatively when using the computer; most pupils have used maths programs that involve problem solving; most pupils have used a language program that involves problem solving; some pupils can use a word-processor to produce a short piece of text; some pupils can write a procedure in Logo; some pupils can retrieve specific pieces of information from a database; some pupils have used an adventure program; some pupils can use a graphics program creatively;

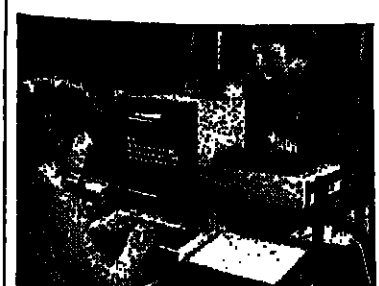
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- Find out whether there is any possibility of improving or adding to your hardware. If you have not got a disc drive consider it to be a first priority, followed by a printer. Always seek i.e.a. advice before ordering.



- Devise a plan for the second year and congratulate yourself on having survived the first.

Barney Fairbrother is deputy head teacher of a primary school in the London Borough of Haringey. Keith Robins is support teacher for computer education with the same authority.



The Synthetic Speech System enables its user to type in Braille or conventional characters and to simultaneously hear the letters and words through a speech synthesizer. When Braille is typed into the system, it is automatically converted to ordinary print. This can be produced as a printout or displayed on a screen in large type for partially sighted operators or to enable the progress of a pupil to be monitored by a teacher. This greatly speeds the process of examinations as Braille experts are not needed to translate the answers.

The Synthetic Speech System was developed at the Open University by Dr Tom Vincent. Apart from a few special switches, only generally available commercial hardware has been used to avoid the high costs of developing new and specialized equipment.

A large number of inquiries have been received since its recent introduction and eight units have been placed in British schools for evaluation.

EXTRA

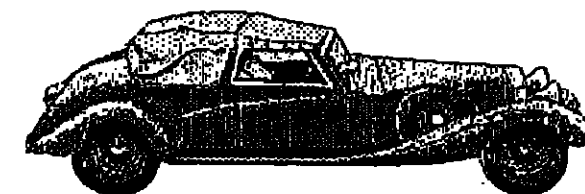
The house that Jane built

Ray Hammond on mouse power

handwriting keeps pace with the class, contents herself with occasional mutters of disgust during the open evenings my wife and I steel ourselves to attend.

I had long since given up introducing Jane to new computers, reasoning that as I am totally mystified by the million different operating systems and commands necessary for the different machines, she would be reduced to a hopeless pile of confusion by exposure to the variety. I should have known better.

I found Jane playing with *Mac Paint* - one of the Macintosh's drawing programs I had left running on the latest machine to threaten my marriage and, without even realizing that an instruction manual was open beside it, she had managed to draw a house and fill in the necessary spaces with a



... and a car to go in garage.

brick design. It must be said that *Mac Paint* (now known as "Mac Paint" around the house) doesn't produce the sort of pathetic spindly houses which have given Logo a bad name: this was the real McCoy, with windows, chimneys, smoke and surrounding lawn all beautifully executed.

"It's the house the eclipse takes place in," Jane told me. I was debating whether to take the fence of logic regarding interior eclipses, when she showed me the story she was writing in her school exercise book. The eclipse had actually occurred in the garden outside the house so I was spared the indignity of trying to explain a concept I don't fully understand.

The outcome of her discovery of The Mac is that Jane opted to re-write her story in *Mac Write* - the word-processing program Apple produce for the Mac - and then transfer her house picture into the centre of the story. She added a sun - I did my best to suggest how the eclipsed sun would look when

it wasn't there - and both she and I were astonished when the clever (and inexpensive) Imagewriter II dot-matrix printer that is more-or-less obligatory with the Mac produced a beautifully printed essay complete with the house picture in the middle of it.

I won't say Jane has become a computer nut since the Mac has arrived - ballet, music, swimming and general homework preclude that - but I have never had to fight so hard to get at one of my own computers before - the Mac Mouse lead has a very high breaking strain! Jane's personal BBC lies totally neglected - yesterday's technology rejected by tomorrow's generation.

The Macintosh is not cheap, especially in its Mac Plus version, but my experience has taught me that its graphics approach has a power to reach children that is unequalled by any other computer I've used, and I've used them ALL!

NEW MAGAZINE FOR SCHOOLS

'Network User' is a new magazine, launched in May of this year, to cater for the needs of teachers using computers in their teaching. The magazine was launched by practicing educationalists concerned that the needs of teachers were not being met by the commercial, advertising led offerings currently available.

'Network User' is different in that it is produced by people experienced in using computers in their teaching. We do not feel that we know it all but we do feel that teachers deserve a better deal than uncritical editorial concerned only with sales and designed to draw in more and more advertising.

We also recognise the underfunding of education and use the magazine as a vehicle for special offers to enable teachers to make the most of their expenditure. As an example, in the July edition of 'Network User' we are offering schools the means to make use of their DTI modems in a really

'Network User' will cover all aspects of computing in schools but we will be placing special emphasis on using computers as tools for communication and shared resources. These resources may be hardware resources such as computer networks but they can also be less tangible resources such as information in a shared database accessible via the telephone system. Topics like word processing, electronic mail, videodata, satellite reception, computer aided publishing and distance learning are covered regularly along with reviews of products and services.

'Network User' is a high quality magazine with many of the usual features including advertising but there the similarities with other magazines ends. For 'Network User' is produced by teachers, for teachers. If you would like to read an impartial magazine that meets your needs, an annual subscription will

Write now for a sample copy to: Network User,

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Just for your information!

A new way to study NUCLEAR REACTORS



A computer program is now available which enables students to study the operation and control of nuclear reactors in a way not previously possible.

The program, which simulates the operation of an Advanced Gas Cooled Reactor, has been developed by the United Kingdom Atomic Energy Authority and the Computers in the Curriculum Project at Chelsea (King's) College, London, with the aid of a team of science teachers. It is published by Longman Micro Software.

The program enables the reactor system as a whole to be studied or component parts, the reactor core, boiler and turbine, to be separately investigated.

Accompanying booklets for the teacher and students contain a detailed description of the model, information on reactors in general and the AGR in particular, a brief bibliography, suggested methods of using the program, and student exercises.

Available on disk for the BBC, RML380Z and 480Z micro computers, the package is aimed primarily at the 14-18 age range, but can also be used as an introduction to nuclear physics at the tertiary level. It is suitable for use either in class demonstrations or by smaller groups or individuals.

The package costs £14.50 plus VAT and the BBC version is available on 28 days approval.

To receive further information and an order form please use the coupon below.

To: Room 119, UK Atomic Energy Authority, 11 Charles II Street, London SW1V 4GP

Please send me information on the UKAEA computer package

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Establishment _____

Address _____

EXTRA

Launched last year on an unsuspecting public, Amstrad's high powered advertising campaign seems to be paying off. Home users, small businesses and now educationists are joining the drive to buy the Amstrad Personal Computer and Wordprocessor. This review looks at the machine from the point of view of education, considers its salient features, and examines its potential within the school and college market.

The Amstrad model PCW8256 is a very cheap personal computer which comes as a package containing: a fullsize keyboard; a green screen monitor with a built-in disc drive and a 256K computer, also built into the monitor and, most amazingly perhaps, a printer.

In addition to this the package includes a bundle of software: *Locoscript* Wordprocessor; CPM and Utilities; *Mallard Basic* and *Dr Logo*.

Manuals are also included in the VAT exclusive price of £399.

There is also currently a model PCW8512 which differs from the PCW8256 in that it contains an extra built in disc drive, 512K of memory and a price tag of about an extra hundred pounds. The first add-on board for the Amstrad, a twin interface allowing connection of a modem and a high quality daisywheel printer is also available at around £50.

The hardware can be plugged together and be up and running very quickly. It uses only one mains plug, which must be regarded as a boon. The 82-key keyboard is very pleasant to type on, and should be quite acceptable to all but the most hardened users of manual typewriters. It contains a wide range of wordprocessing facilities, including CUT, PASTE, COPY, as well as functions which indicate actions occurring to PAGE, LINE, WORD and END OF LINE, etc. The keyboard is very comprehensive for such a low-priced machine.

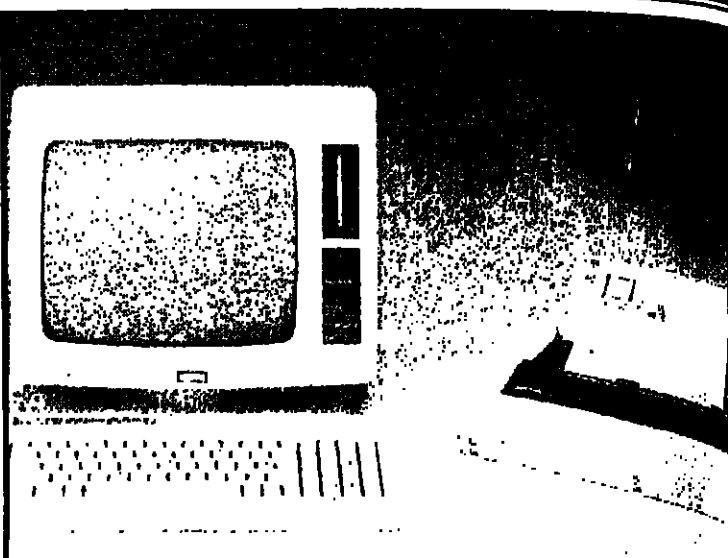
The hardware heart of the system is the green screen monitor, a 32 line by 90 characters per line display unit, which contains the 256K processor, and a built-in disc drive. This drive takes 3 inch discs, and personal experience in the far north of the UK indicates these are in short supply. Certainly, would be buyers should consider the '10-disc' on their inventory to take away with the computer.

In practice the disc system works well giving 173K of space on each side of a disc. The discs have to be removed, turned over and re-inserted to access their second side, but this is no great problem, at least for users concerned with reports up to chapter length, or with medium sized databases.

The processor itself is based around the 8-bit technology common to machines like the older RML380Z computer, but the memory management of the Amstrad gives this technology a new lease of life. The 256K of memory space is used in a number of ways, including a 61K user program area, some graphics memory, and a section of memory given over to act as a 128K RAM disc. This RAM disc is called drive M and it behaves just like an extra disc drive, except that movement of information to and from a mechanical disc drive. This makes the PCW8256 a fast machine when handling software that requires continual overlying of programs, for example with *Wordstar*, or even its proprietary wordprocessing package, *Locoscript*.

The final item of hardware is a printer, which can be used to produce rough text copies, near letter quality copies or even copies of the graphics screen. The printer is quite small but gives acceptable copy, especially on the NLQ setting. An advanced feature of the Amstrad is its ability to indicate on screen the status of the printer. This is done on a status line at the bottom of the screen. The printer itself is capable of handling a wide range of commands, including underlining, bold face, condensed, elite, proportional text, italics and subscripts.

Certainly no piece of hardware is worth anything without suitable software, and the PCW8256 has quite an amount built into it. The most important piece of software must be the *Locoscript* wordprocessor. This is a good quality wordprocessor capable of producing reports, notes, memos, and longer documents, such as articles and books, in chapter-size chunks. *Locoscript* is designed to be the main selling point of the Amstrad 8256 and it fulfills its purpose admirably. It drives the hardware to the full, making use of such novel things as 'windows' for



Dark horse

The Amstrad is scoring some spectacular successes in the home and business market. Does it also have a role in education? A review by Joe Telford

messages, and warning tones for user errors. Combining the wordprocessor with the fast RAM disc enables long textfiles to be edited very quickly, and the user friendliness of *Locoscript* gives easy access to its more powerful commands including Search and Replace, Copy, Cut and Paste, Formatting and Printing, Underlining and other features can be shown on screen and the display is identical to the printed page.

To imagine that a beginner could pick up the *Locoscript* disc and drive the system correctly, is wrong. One of the two manuals covers the use of *Locoscript* and its style is sequential. A beginner could work through it learning more advanced features as he or she progresses, but then dip into it to refresh their memory of particular features as they are required.

I am less enthusiastic about the rest of the software. In any application other than *Locoscript*, the computer uses the CPM operating system, favoured in the RML380Z and other computers. It seems that you either love CPM or hate it. Afficionados would say that it gives access to the largest software libraries available and is a professional operating system. Others would say that most of the available CPM software is clumsy, out of date, and difficult to use.

Certainly my estimation of local non-specialist teachers using CPM bears out the latter comment. CPM is nowhere near as friendly as *Locoscript*. Other facilities include *GSX Graphics*, *Mallard Basic* and *Dr Logo*. *GSX Graphics* requires a good deal of skill to handle. It is basically a set of machine code graphics routines, and you need to know exactly what you are doing. *Mallard Basic* is a good professional version of *Basic*. Certainly very useful for the dedicated software writer, but not as useful in much of the educational environment.

Dr Logo is another surprise. A pleasant implementation of the *Logo* language which we should really all be using. This version is somewhat short on commands, and the manual is a little terse, with a couple of real mistakes (in exiting the *Logo* editor for example), but it provides the only major useful piece of software other than *Locoscript* within the Amstrad Package.

If the purchaser of a brand new Amstrad PCW8256 decides to move out into the realms of information handling, spreadsheets or accounts packages, then the only possibility is software from a third party. The Amstrad manuals indicate possible problems: Is the software compatible with CPM plus? available on 3 inch discs? correctly configured for the Amstrad?

Having said that, a quick scan of the 'more professional computer journals' shows a number of firms offering packages, including spreadsheets, space-wars, electronic mail and adventure games, all of which will supposedly run on PCW8256 without amendment. The typical price seems to be around £45 but some packages are as much as £200. Certainly all the subdi-

any packages are available, but at a price.

Amstrad distributors are recording high sales in the education sector, where exactly would those sales be targeted?

The primary and special education market is only peripheral to the Amstrad PCW8256. The need of children in a wide and balanced curriculum for good educationally designed software means that the Amstrad would not be able to compete at the level of, for example, the Acorn Master series. Once these schools are satisfied that the curriculum needs of their children are being met by existing means, it might be that they consider the PCW8256 as an office tool.

A number of Amstrads are finding their way into secondary schools. This is partly due to such projects as the TVET and TRIST initiatives. The emphasis seems to be mainly on the GCSE years of 14-16 plus, and the curriculum areas are Business Studies and Typing, and for general use in English Departments. Considering the movement in Business Studies away from mechanistic skills like typing, it might be the case that the Amstrad becomes more limited over the next year or so.

Whether the Amstrad offers an appropriate wordprocessing disc for pupils in the first three years of secondary school, compared with various graded wordprocessing packages available for other machines, is open to debate, but perhaps the greater flexibility of those machines might win out in any long term battle. The secondary school market is a typical target for the Amstrad, and a general office work it would do well, being less easily commandeered by general curriculum work.

A number of Further Education colleges are buying Amstrads for use in wordprocessing labs, and the first use of these is to service courses in typing and wordprocessing for secretarial staff in the outside world. There seems to be a continuous stream of clients willing to learn the new skills of wordprocessing and also ready to part with the price of a cheap word processor.

More increasingly teachers, lecturers and administrators are beginning to look for a useful tool for work at home or in a small office. The Amstrad could be the ideal solution for such people. The major competitors for the Amstrad at which the Amstrad is aimed are the BBC Master 128 and the Atari 520ST. Typical educational prices of comparable systems are: Amstrad PCW8256 £399, BBC Master 128 £499, Atari 520ST £499.

The message seems clear. For pure admin use, or for dedicated word processing the Amstrad is a very good buy. But remember its role is specific, not general, like the other machines. It could be very useful curriculum work particularly with younger children. For more on hardware see 'The New Hardware' - page 36.

INDUSTRY... EDUCATION... TECHNOLOGY...



Sandie Dinning

Over recent years there has been increasing links and involvement between education, industry and commerce, although there is still a long way to go.

With the advent of new technology, and systems such as TTNS, there is an ideal opportunity for imaginative use of the computer in our classrooms.

The computer is no longer the domain of the Computer Studies Department, it is slowly reaching out to other areas of the curriculum, as a schools resource.

The present industrial sponsors of TTNS are helping education to make this transition by providing creative database content.

Technology has played a central role in bringing industry towards the 21st century. How many of those companies have EVER considered how easy it would be to channel that expertise towards the vital role Education has to play?

However, at the end of the day, together with Industry and Commerce we can only come some way to meeting your needs.

Obviously a system such as TTNS is an ideal medium for such communications. As a starting point we would find it extremely useful if you could respond to the following questions.

1. What kind of information do teachers want from a database?
2. Is Industry producing the right kind of information?
3. Does new technology help break down barriers or create them?
4. What do you see as the key issues with regards to Industry and Education over the next two years?

A Request from the Banking Information Service

Please let us know what you think of our Examination Resource database and Interactive Form, accessed on the TTNS National Database, through CURRICULUM and SCHOOLS RESOURCES, for the following subjects:

Business Studies, Careers, Commerce, Computer Studies, Current Affairs, Home Economics, Library, Life Skills, Mathematics, Technology and World of Work.

Also, in which areas, relevant to BIS, would you welcome regular information up-dates?

Send your suggestions and criticisms to Maureen Cork, Mail Box 37, York.

A SPONSOR'S VIEW

TSB's early investment in technology underpins its advance into many areas of operation. As the only UK bank to operate an on-line real-time computer system for the entire branch network, TSB leads the field in the application of technology to modern banking.

But the Bank's commitment to technology is far from restricted to the provision of banking services in the most efficient, convenient and flexible way.

TSB has long recognised that technology has an equally important marketing application and, moreover, one which feeds the development of entirely new products which may be only indirectly related to actual banking services.

TSB's involvement in TTNS is an example of the importance the Bank places on information technology and, through the Network, TSB seeks to keep up to date with schools' changing information requirements. This feedback element is crucial to the Bank's continued ability to respond quickly and correctly to requests for information.

It is TSB's intention to develop further packages of this kind in the future that are particularly relevant to school curricula.

Jan Smith, TSB, England & Wales (YY027)

BP LINK SCHOOLS

For many years BP have invested heavily in education, and are widely recognised as one of the leading UK companies in this field. Around the country BP have a large number of schools with whom they have a special and long standing relationship. They are called the 'BP Link Schools'.

For their sponsorship BP have chosen to pay the TTNS subscription for a large proportion of these schools.

This is a good example of industry taking the initiative in applying new technology to improve communications between the worlds of industry and education.

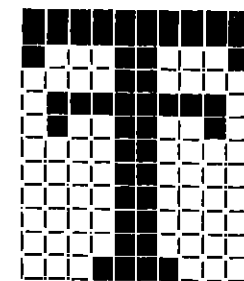
We at TTNS look forward to many more similar initiatives throughout the coming year.

TO INDUSTRY Is your Company doing enough? Could You do more?

CONTACT:

If you have any comments or queries regarding anything you have seen on this page, please contact Sandie Dinning, TCD017, or P.O. Box 7, 200 Grays Inn Road, London, WC1X 8EZ.

For any further information about TTNS please telephone our office on 01234 71044 or 01234 71045.



THE TIMES
NETWORK
SYSTEMS



Dr. Eric Bates, DTI



Jan Smith, TSB

NATIONAL ADVISORY BOARD

The National Advisory Board meets twice yearly, providing Educationalists, Sponsors and Information Providers with the opportunity to discuss developments in new technology for Education.

This is just part of TTNS' continuous policy to bridge the gap between the world of education and the world of work.

The next meeting will be taking place on Friday, 20th June in London. Members of the National Advisory Board are:

Mr J ANDERSON, Inspector, Northern Ireland Education Dept; Dr E BATES, Head of IEU, DTI; Ms C CHOYIL, Head of BBC Schools Radio; Mr G GOLDSTEIN, Staff Inspector,

DES; Dr M HALLE, Southampton Institute of H.E.; Mr M HARRISON, Consultant to MSC; Mr M A HIGGINS, Chief Executive, PCAS; Dr B KINGTON, IBM UK Ltd; Mr P MARCH, Principal Careers Adviser, Avon LEA; Mr C MARSDEN, BP; Mr J McDONALD, Scottish Education Dept; Miss J SMITH, Trustee Savings Bank; Mr B STEVENS, Banking Information Service; Mr D STREATFIELD, National Foundation for Educational Research; Capt. I SUTHERLAND, Director of Navy Recruiting; Mr D TAYLOR, NERIS; Lt. Col. P WOOD M.B.E., Directorate of Army Recruiting; and, of course, representatives from TTNS and the Regional Advisory Groups.

TTNS KEEPING INDUSTRY AND COMMERCE IN TOUCH

The growth of information on the database has accelerated over recent months.

It is now possible through TTNS to...

- * Order your copy of TES
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- * Seek Technical advice from Technomatic
- * Learn how The British Railways system works
- * Access PCAS Course Information
- * Search Examination Board developments

TTNS IN EVERY SECONDARY SCHOOL

Sixteen Local Education Authorities have shown their full commitment to TTNS and now have a TTNS mailbox in every secondary school in their jurisdiction.

Those LEAs are: Borders Clywd Derbyshire Dumfries & Galloway Enfield Hampshire Hounslow Kingston Newham Rotherham Salford South Tyneside Sunderland Tameside, Tayside

and many more. To find out more, contact: TTNS, 200 Grays Inn Road, London, WC1X 8EZ.

SERVICE FOR SPONSORS



Sheila Nelmes, of GSN, and James Fairlie, of Michael Benn Associates make up the Project Management Team for TTNS

TTNS provides sponsors with a comprehensive package putting them directly in touch with young people.

Michael Benn and Associates with GSN Educational Software, make up the Project Management Team for TTNS, offering Sponsors software and design for credible and lively educational databases and advice on implementation. Work has already been completed for TSB Bank, The Stock Exchange, The Royal Navy and TES; in the process of preparation are databases for the

Engineering Industry, Rank Xerox, the Nottingham Group and a revamped Army database, with others in the pipeline.

The Project Management Team produce Resource Material for Education and Industry. To maintain high standards they ask education in particular to contact them with comments and ideas (on TCD100475 Tel: 0937 844524 or via the TTNS office).

Computers & Basic Education

Seven Computer Programs for use in basic education

This software is suitable for use on the BBC microcomputer Model B and there are seven programs on a variety of subjects. Programs focus on Gas Meters and Bills, Rates, Telling the Time, Punctuation, Spelling (2 disks), Crosswords (2 disks) and the 24-hour clock and Timetables.

Price: £7.00 each double disk (postage 35p)
£5.00 each single disk (postage 35p)
£34.00 complete set of 7 (saving £5.00) (postage £2.00)



Computers in Language and Literacy Work

Published jointly with the IEA, this handbook aims to help ESL and Basic Education Organisers and Tutors by surveying software and considering future developments. It is also a straightforward book for the non-expert.

Price: £2.50 (plus postage 50p)

Copies of these publications are available from The Adult Literacy and Basic Skills Unit, Kingsbourne House, 229/231 High Holborn, London WC1V 7DA. Tel: 01-405 4017.



COMPUTER AIDS THE FOX COVER PICTON GORSE CHESTER CH2 4HB Tel: 0244 300363

This enables teachers with no programming knowledge to write programs for their pupils.

Screen pages (graphics & text) are created with an easy to use TELETXT EDITOR and are arranged, together with the child's inputs using the PROGRAM EDITOR. Music can be selected (if desired) and a title page can also be set up.

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AMSTRAD, COMMODORE, BBC

BIOLOGY 2 (age 13-16)
 Contains a wide range of biological information on all the key areas of English spelling. Contains: Approximation, simple interest, factors, percentages, simple calculations, algebraic factors, sequences and series, limits. The program includes essential formulae.
 Commodore 64, Amstrad 486, BBC 2

MAGIC MATHS (age 4-8)
 This is a simple program that really does make the learning of mathematics fun. It is a program that will help you as well as learn from Magic Maths. Amstrad Action, April 1986.
 Amstrad

MATHS MAMA (age 5-12)
 An exciting maths education game, deals with multiplication and division. "Super graphics in this addictive game".
 Amstrad

BETTER SPELLING (age 8-14)
 An exciting new way to improve your spelling. This courseware package concentrates on all the key areas of English spelling. Read words for money with up to 10 main options. Prepared by an English language author.
 Commodore 64, BBC 2, Amstrad

BIOLOGY 1 (age 12-16)
 This program gives key definitions and promotes understanding (as many through the questions and answers) on all the key areas of English spelling. 1. Life, 2. Cells, 3. Microbes and Plants, 4. Photosynthesis and Enzymes, 5. Respiration, 6. Transport, 7. Sensitivity, 8. Reproduction, 9. Cycles and Micro-organisms.
 Amstrad, Commodore 64

PHYSICS (age 12-16)
 An exciting program which makes excellent use of graphics. Contains: 1. Matter, 2. Density, 3. Law of the Lever, 4. Pressure, 5. States of Matter, 6. States of Matter, 7. Heat, 8. Temperature, 9. Current Electricity, 10. Magnetism - Electromagnetism, 11. Light, 12. Sound.
 Commodore 64, Amstrad, Commodore 64, disk only

ORDNANCE SURVEY (age 12-17)
 A wide ranging package of information. Ideal for first examinations. Contains: 1. Chemical Changes, 2. Copper, 3. Hydrogen, 4. Oxygen, 5. Nitrogen, 6. Air, 7. Carbon Dioxide, 8. Calcium, 9. Sodium, 10. Potassium, 11. Magnesium, 12. Zinc, 13. Iron, 14. Lead, 15. Tin, 16. Antimony, 17. Arsenic, 18. Bismuth, 19. Tellurium, 20. Polonium, 21. Astatine, 22. Francium, 23. Radium, 24. Actinium, 25. Thorium, 26. Protactinium, 27. Uranium, 28. Neptunium, 29. Plutonium, 30. Americium, 31. Curium, 32. Berkelium, 33. Californium, 34. Einsteinium, 35. Fermium, 36. Mendelevium, 37. Nobelium, 38. Lawrencium, 39. Rutherfordium, 40. Dubnium, 41. Seaborgium, 42. Bohrium, 43. Hassium, 44. Meitnerium, 45. Darmstadtium, 46. Roentgenium, 47. Copernicium, 48. Dubnium, 49. Seaborgium, 50. Bohrium, 51. Hassium, 52. Meitnerium, 53. Darmstadtium, 54. Roentgenium, 55. Copernicium, 56. Dubnium, 57. Seaborgium, 58. Bohrium, 59. Hassium, 60. Meitnerium, 61. Darmstadtium, 62. Roentgenium, 63. Copernicium, 64. 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Hassium, 1148. Meitnerium, 1149. Darmstadtium, 1150. Roentgenium, 1151. Copernicium, 1152. Dubnium, 1153. Seaborgium, 1154. Bohrium, 1155. Hassium, 1156. Meitnerium, 1157. Darmstadtium, 1158. Roentgenium, 1159. Copernicium, 1160. Dubnium, 1161. Seaborgium, 1162. Bohrium, 1163. Hassium, 1164. Meitnerium, 1165. Darmstadtium, 1166. Roentgenium, 1167. Copernicium, 1168. Dubnium, 1169. Seaborgium, 1170. Bohrium, 1171. Hassium, 1172. Meitnerium, 1173. Darmstadtium, 1174. Roentgenium, 1175. Copernicium, 1176. Dubnium, 1177. Seaborgium, 1178. Bohrium, 1179. Hassium, 1180. Meitnerium, 1181. Darmstadtium, 1182. Roentgenium, 1183. Copernicium, 1184. Dubnium, 1185. Seaborgium, 1186. Bohrium, 1187. Hassium, 1188. Meitnerium, 1189. Darmstadtium, 1190. Roentgenium, 1191. Copernicium, 1192. Dubnium, 1193. Seaborgium, 1194. Bohrium, 1195. Hassium, 1196. Meitnerium, 1197. Darmstadtium, 1198. Roentgenium, 1199. Copernicium, 1200. Dubnium, 1201. Seaborgium, 1202. Bohrium, 1203. Hassium, 1204. Meitnerium, 1205. Darmstadtium, 1206. Roentgenium, 1207. Copernicium, 1208. Dubnium, 1209. Seaborgium, 1210. Bohrium, 1211. Hassium, 1212. Meitnerium, 1213. Darmstadtium, 1214. Roentgenium, 1215. Copernicium, 1216. Dubnium, 1217. Seaborgium, 1218. Bohrium, 1219. Hassium, 1220. Meitnerium, 1221. Darmstadtium, 1222. Roentgenium, 1223. Copernicium, 1224. Dubnium, 1225. Seaborgium, 1226. Bohrium, 1227. Hassium, 1228. Meitnerium, 1229. Darmstadtium, 1230. Roentgenium, 1231. Copernicium, 1232. Dubnium, 1233. Seaborgium, 1234. Bohrium, 1235. Hassium, 1236. Meitnerium, 1237. Darmstadtium, 1238. Roentgenium, 1239. Copernicium, 1240. Dubnium, 1241. Seaborgium, 1242. Bohrium, 1243. Hassium, 1244. Meitnerium, 1245. Darmstadtium,

EXTRA

Rules of the game

Mike Thorne on expert systems

An expert system is a collection of one or more programs which, when run on a computer, mimic the activities of a human expert. Existing "real world" expert systems include those capable of:

- Medical diagnosis, including three different systems for diagnosis of bacterial infections; an adviser on general internal medicine and diagnosis of the eye disease Glaucoma
- Evaluating a given geological site for the existence of certain valuable mineral deposits before any expensive excavation is carried out
- Working out the structure of complicated chemical compounds
- Deciding on the best configuration of a large computer system for a given user's requirements.

As a technology, expert systems are barely 20 years old and their design is still very much the subject of research. However, in recent years a number of products have emerged which run on microcomputers and enable relatively small expert systems to be constructed without programming knowledge. These products are called expert system shells because they can be turned into several different expert systems. To produce an expert system for a given subject area using a shell, the user must be given some knowledge about the subject. This is usually given in the form of facts and rules. By way of example, suppose we wanted to construct an expert system which would tell us why his or her car won't start. Then we would give the expert system shell several rules like:

- rule 1. If fuel gauge registers empty then cause is no petrol
- rule 2. If there is not a spark from the spark plugs then cause is dirty or worn plugs

Having given it the rules, we would then expect the expert system shell to construct a computer program. If we then run the program, the "expert" would ask questions based on information we'd given in the rules. For example:

Is it true that fuel gauge registers empty?

If the answer were yes then our would print:

cause is no petrol

Since this is what it has deduced from the first of our two rules it must be the reason for the car not starting. On the other hand, should the answer be no then the next rule will be tried, and so on until the cause is identified or all the rules are exhausted. In the latter case the automatic expert will print something like

unable to help on this occasion and execution will terminate.

The process for using an expert system shell to construct an expert system can therefore be summarized as follows:

- (1) Give the shell the facts and rules

Figure 1 (extract only)

- rule 1
if query Anything
then check answer
and check Anything
- rule 2
if home is flat
then large_dog is not possible
- rule 3
if home is bungalow
then large_dog is possible
- rule 4
if home is house
then large_dog is possible
- rule 5
if home is flat
then medium_dog is not possible
- rule 6
if home is bungalow
then medium_dog is possible
- rule 7
if home is house
then medium_dog is possible
- rule 8
if home is flat
then small_dog is possible
- rule 9
if answer is no
then report I'm sorry but you can't have a dog.



which contain the expert knowledge

(ii) Tell the shell to automatically construct an expert system using these facts and rules

after which the expert system can be run by people knowing nothing about either the expert system or the facts and rules given to the shell.

It follows that there are at least three possible approaches to the classroom use of expert system shells. First, a teacher could construct an expert system and make that available for pupils' use. Applications of this nature might include careers guidance, a teaching aid for lessons on chemical analysis, and a system which tries to guess the composer of a piece of music from information supplied by the pupils.

Second, the pupils could themselves be allowed to use an expert system shell to construct their own expert systems. Such activity could be seen as an extension of the fairly widespread use of programs like *Tree of Knowledge* and *Talkback* for (primary) school work ranging from language development, through creative writing, to the classification of plants and animals.

Finally, with expert systems an exciting possibility for industry at the moment, there would seem good reason to use expert systems and expert system shells in computer studies classes both to study how they work in their own right and as an aid to teaching other computer studies concepts.

Thanks to a recent MEP initiative, several primary and comprehensive schools have been involved in short-term evaluations of some commercially available expert system shells. The shells used run either on 16 bit computers like the Research Machines Nimbus and IBM PC or, in one case, on a medium sized mainframe computer.

This does not make these case studies irrelevant to teachers currently working with 8-bit microcomputers like the BBC machine. After all, just 10 years ago, Logo was only available on mainframe computers and the language Prolog was virtually unknown to most of the computing world. Moreover, Jonathan Briggs at Kingston College of Further Education is currently developing some interesting ideas which focus on the educational gains to be made from individual elements of an expert system and which are sufficiently self-contained to be easily accommodated on an 8 bit machine.

Reports on these case studies can be found in the MEP Reader *Call In The Expert* (from MEP, 4 Colshill Terrace, Llanelli, Dyfed).

Southbrook Junior School, for example, used the Expertech XI expert system shell. In Steve McCarthy's class

Figure 2 (extract only)

- rule 1
if query Anything
then check Anything
- rule 2
if price = 100
and memory = 32
and language includes basic
and use includes games
and use includes programming
then most suitable computer is Acorn Electron
- rule 3
if price = 105
and memory = 48
and language includes basic
and use includes games
and use includes programming
then most suitable computer is Sinclair Spectrum
- rule 4
if price = 290
and memory = 64
and language includes basic
and use includes games
and use includes programming
and use includes business
then most suitable computer is Amstrad CPC 464
- rule 6
if price = 290
and memory = 32
and language includes basic
and use includes games
and use includes education
and use includes general computing
and use includes business
then most suitable computer is Acorn BBC B

the girls decided to create a knowledge base which dealt with making recommendations to enquirers about the type of dog suitable for them as a pet, while the boys decided to write a knowledge base for choosing a suitable computer for an enquirer.

Steve McCarthy gives the following description of the project: "Deciding upon the relevant parameters was very interesting, with each group trying to go further than time would really allow. The girls quickly had a knowledge base running (see figure 1) but wanted to extend it and this they are still in the process of doing. At the beginning of one of their development sessions they noticed that some of the rules were missing. I asked how this could be and after a little thought they decided that their work had not been saved from the previous session. I had never shown them how to load and save their files while in 'toolkit' mode but they had watched me doing it at the end of each session and from then on they regularly saved their work."

"The boys came across many problems due to the complexities they were building into their system, and I tried to guide them away from making their rules too complicated (see figure 2). At one point they introduced several kinds of basic as one of their parameters. When testing the system they noticed that the BBC Model B did not come up as the 'most suitable computer' and they were concerned that something was wrong. After a short discussion it dawned on them that, considering the parameters they were using perhaps the BBC B was not going to be the 'most suitable computer' because of lack of memory and price."

"Throughout the trials, tribulations and frustrations, the children have been patient and have generally enjoyed themselves as well as developing skills of analysing and structuring knowledge in a form that could be accessed by others."

Classroom success in Northamptonshire is balanced by a report from PEG-Exeter, a research group specializing in educational applications of Prolog and related expert systems. From their investigations, Jessica Curridge and Jon Nichol conclude that: "the XI language was difficult for pupils; the XI documentation is not suitable for schools and needs rethinking and rewriting if it is to be used in schools; and more experimental work needs to be done with children both on how XI operates and on the creativity aspect of what XI does."

If the grammar required by XI is regarded as troublesome, that demanded from the ESP/Advisor expert system shell is positively Byzantine. Nevertheless, perhaps largely thanks to a Logo background, the more able

children from the Ton-yr-ywen Primary School in Cardiff managed to produce their teaming expert system (figure 3). Researcher Mike Trellaway summarizes: "Their success says more for the benefits of Logo use than it does about the ease of use of ESP. The system, as supplied, would have very limited possibilities for creative use in schools. The syntax rules required by the compiler would dissuade many children and most teachers."

The EXPERT-EASE expert system shell is unique among those used by schools in the MEP Reader in that it deduces its own rules from the examples you give. Thus, given the examples:

green hairy gooseberry
green smooth apple

EXPERT-EASE would deduce a rule similar to

if green then
if hairy then gooseberry
if smooth then apple

Don Walton used EXPERT-EASE at Houghton County Primary School in Cambridgeshire in a very imaginative way. The children involved were set the task of describing themselves well that the system EXPERT-EASE generated could tell them apart.

As part of an ESRC project, separate (but related) studies are being made of that APES expert system shell at Chelsea College and the Institute of Education, London. APES is given rules in a format very close to the programming language Prolog (one of its variants). It is also characterized by its ability to explain itself.

At the Institute of Education, Nancy Law, Jon Oghorn and Denise Whitlock are in the process of using the latter aspect of APES to study pupils' intuitive ideas about science. David Bateman at King's College is studying the use of the machine of both human and machine "experts".

A lot of work needs to be done to back up these mostly anecdotal accounts with formal research. There are two main questions to be asked: are we ready for the technology expert systems offer us; and are the expert systems ready for us? In this collection of case studies neither question is answered but the diligent reader will find plenty of material to assist in hypothesis-forming and these hypotheses could be tested in future work.

For example, several contributions criticize the manuals and tutorials supplied by the expert system manufacturers which were written for the business market. Others find that the manner in which the rules given to expert system shells have to be formulated is not adequate for classroom needs. Another indicated weakness is the lack of inheritance of properties by a given stored fact from another. On the positive side, several authors found themselves and their pupils surprisingly able at the techniques involved in expert systems work and to benefit from the new kinds of classroom activity they make possible.

Figure 3 (extract only)

- rule 1
A teaming expert system.
Author: Class 11 (age 10-11), Ton-Yr-Ywen Primary School
Created: March 1986
title 'Idiot's guide to tea making!'
- rule 2
IDOTSGUIDE TO TEA MAKING!&
- rule 3
'So you don't know how to make a cup of tea Well with this expert system you will be able to make tea with the best of them!&
- rule 4
'This knowledge base is intended to provide useful advice on the art of tea making. It assumes that you have all the equipment needed.&
- rule 5
'You must have a water supply, a kettle, tea pot, tea bag, milk and sugar and something to put the tea into.&
- rule 6
'You must have a water supply, a kettle, tea pot, tea bag, milk and sugar and something to put the tea into.&
- rule 7
'You must have a water supply, a kettle, tea pot, tea bag, milk and sugar and something to put the tea into.&
- rule 8
'You must have a water supply, a kettle, tea pot, tea bag, milk and sugar and something to put the tea into.&
- rule 9
'You must have a water supply, a kettle, tea pot, tea bag, milk and sugar and something to put the tea into.&
- rule 10
'You must have a water supply, a kettle, tea pot, tea bag, milk and sugar and something to put the tea into.&
- rule 11
'You must have a water supply, a kettle, tea pot, tea bag, milk and sugar and something to put the tea into.&
- rule 12
'You must have a water supply, a kettle, tea pot, tea bag, milk and sugar and something to put the tea into.&
- rule 13
'You must have a water supply, a kettle, tea pot, tea bag, milk and sugar and something to put the tea into.&
- rule 14
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- rule 50
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- rule 51
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- rule 52
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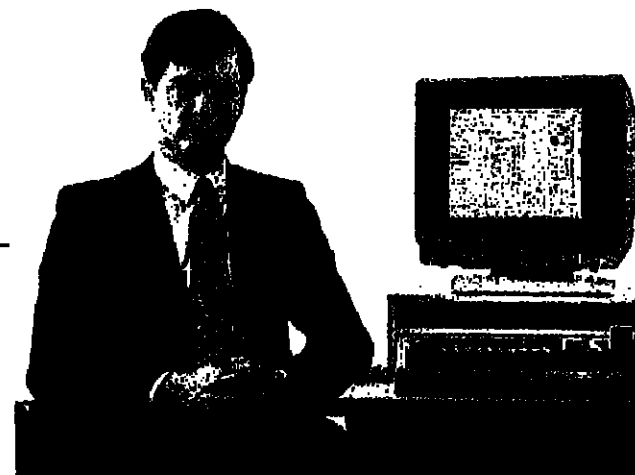
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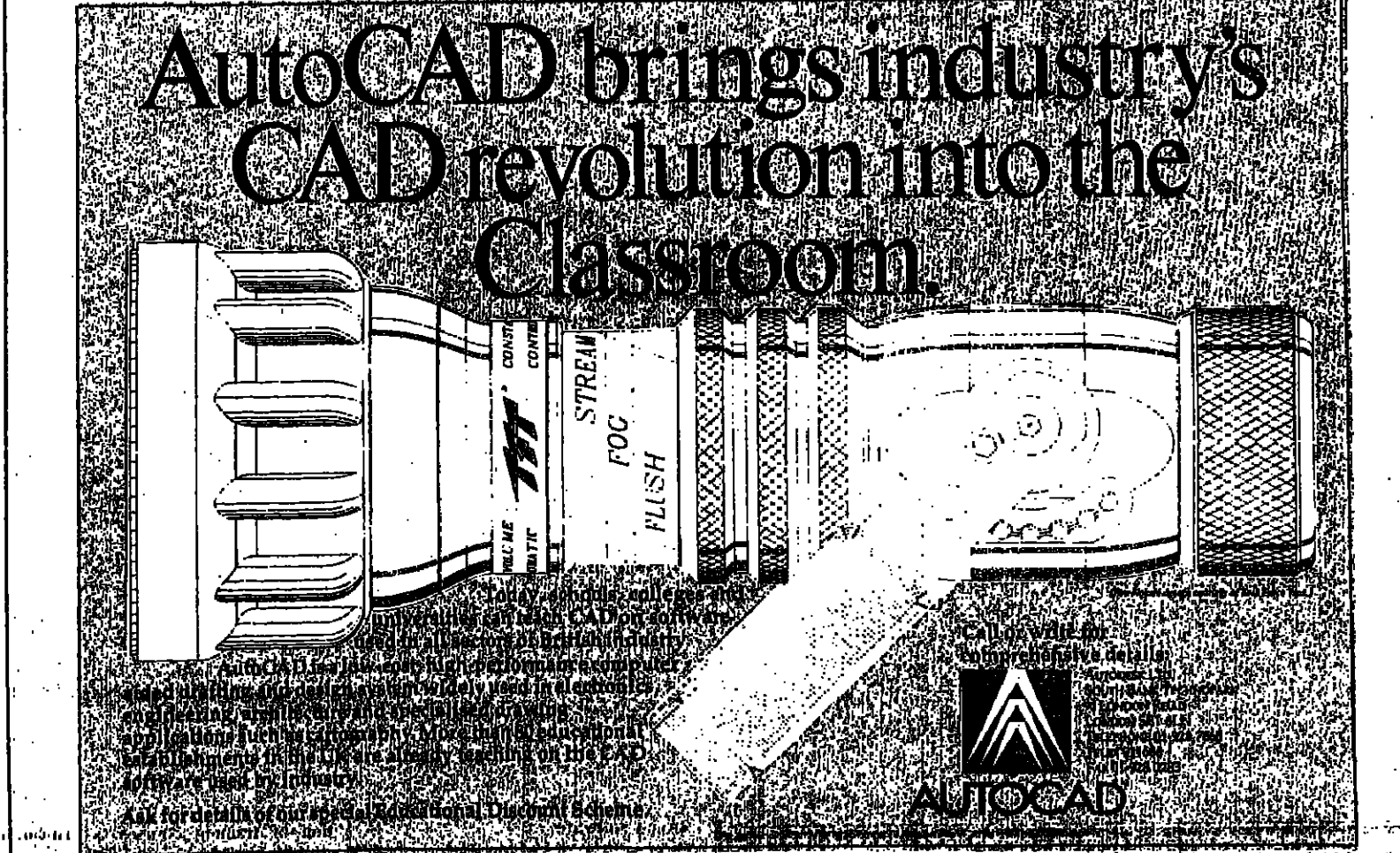
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Much of the knowledge and expertise for the Honor Oak project has come, free of charge, from Inter Action's Community Computers UK set up, which has recently received pump priming finance from the DES to help young people make better use of computers outside the context of the

Other framework programs such as *Touch Explorer* and *Mallory* can be used to generate adventure games, or explore environments created by the teacher, or be investigated by the pupils to discover information. Files for programs of this type can be written with various levels of information and access. Information can be very simple, perhaps just one word, or it can be very

As yet, framework programs are not widely used. Framework programs cannot just be plugged in, booted up and run. Although some, for example wordprocessors, can be used simply to most benefit from having material

There's no doubt that Inter Action's aim is massive growth in the field of youth work and computers. Two long-term aims remain: a national network (electronic or otherwise) of organizations involved in the field, and a pull-out news-sheet, incorporated into a popular computer magazine.

For more information on CCUK write to Inter Action, Royal Victoria Dock, London E16 1RT. 01-511 0411/6.

Magic Seeker uses three programs: *Lin, Prompt, Touch Explorer and Wild Draw* are free from the Special Education Micro Electronics Resource Centres (SEMERC). The programs *Writer, Ourselves and Mallory* are in the free Micro Electronics Project (MERP). *Primary Project Packs, Colourworld and Datatype* are in the Micro Special Pack (Hill McGibbon) and *Frontpage* is available from Microelectronics and Primary Education (MAPE). These are a number of "Turtle" programs and it is necessary to determine what each offers to assess its suitability for a particular school or subject.

notes. "Just touch" & "Touch It".
CET/MEP. (1982). Information sheet.
Microelectronics and Special Education.
Futcher D. (1985). Touch It and see.
Learning To Cope.
Mitchell, D. (1986). Pointing the finger.
Learning To Cope.

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EXTRA REVIEWS

Writing	Disk filing	Printing	Dictionary	HELP!	Bins	Cut & Copy	Centre text	Case change	Planner

Folio
£15 + VAT or i.e.a. bulk discount or licence available.
Teddmen Software, PO Box 23, Southampton SO9 7BD.
PenDown
£34 + VAT
Logotron, 5 Granby Street, Loughborough LE11 3DU.
Alpha
£30
AUCBE, Endymion Road, Hatfield, Herts AL10 8AU.

It's nearly four years since *Wordwise* revealed a large-scale demand for teacher-friendly wordprocessing on the BBC Micro. Not until recently has there been any serious competition. Three new products illustrate sharply contrasting approaches. All are targeted specifically at the primary market; to some extent they aim at different age levels and could be seen as complementary.

Folio is the simplest and cheapest at £15 and needs only the disc, making it more portable than the other two which need the ROM chip as well. It is delightfully simple to use, and features the most legible screen display I've ever seen. At last you see large, well-formed characters contrasting nicely with a dark screen; better still, they are proportionally spaced and use appropriate letter shapes for juniors.

You can also print from *Folio* in a range of proportional sizes - a major advance over the appalling double-width Epson characters with which so many primary schools make do, and much easier than having to save from *Wordwise* and go into a separate

large-print utility. *Folio* can also include accents for foreign language work in *Folio* (see samples). Teddmen has considerable experience of foreign language work. They are working on French, German and Spanish character sets featuring floating accents and are developing excellent word-processing software in various Asian languages. This experience has stood them in good stead in designing their screen displays.

The text processing commands are simple and easy to use, with menu control both for text processing and controlling the options. Great attention has been paid to making mistakes easy to avoid and retrieve, with a range of safety-nets and reminders. While editing you can press the key to Undo your last instruction. The teacher can set the system up to offer only a restricted set of commands, in which all the potentially "dangerous" keys are hidden or disabled. This offers a useful shallow-end approach (for novice teachers, as well as pupils) as so often in the early stages small mistakes can destroy confidence and undermine the beginner's growing competence.

For pupils who find it difficult or impossible to press two keys at once, there is an option for the teacher to get round this with the key. Combined with the control of selectively disabling certain functions, this can give great assurance to anyone with learning difficulties, physical handicap or visual impairment. *Folio* must have immense scope in special education. It can be

used with a Concept board to provide single-key input, and there is provision to edit the overlays.

In addition to selling discs individually, Teddmen will license i.e.a.s to reproduce it. Refreshingly, their licence permits use by pupils of that authority in their homes - all at a cost of 1.2p per child (aged 5 to 11). They will reproduce discs, manuals or complete packs "at nominal cost" to licensed authorities. The trial version of *Folio* (which I used in April) has been in schools since December '85, and has already been modified substantially. The production version is to be published in June and promises various improvements including on-screen underlining, full justification and different fonts.

PenDown is a more powerful package consisting of ROM, disc, manual

choice of Help on Help (including information on how to set up your own Help file), Glossary, Sentences or Starting a dictionary. Thus teachers can customize the kind of help available to the needs of their pupils. Similarly, the dictionary red key reveals a six-item dictionary menu, each option of which is well explained in the manual using a top-down approach with plenty of illustrations.

There is also a font editor for those who wish to create additional fonts or icons of their own. Personally I feel that most people would rather be given high-quality fonts than reinvent them, and I look forward to the time when all schools have letter-quality output from their dot-matrix printers. Judging by the way prices are tumbling, that should be a few years at most.

For Epson-style printers, *PenDown*

mand-driven, not menu-driven. Users can supplement the resident command with ones of their own, by defining new commands in terms of existing ones using the TO command. This makes *Alpha* a programmable wordprocessor on the lines of *Wordwise Plus*, though in the first few hours' acquaintance it didn't seem as approachable.

The program is supplied as a ROM together with a disc containing utilities and sample "lexicons". *Alpha* supports a lexicon that can be customized to individual needs and provides access to 1,500 or so words. The lexicon is useful not merely as a spelling aid, but also as a bank of specialist terms and as a treasure chest of words that you may want to use but may not be able to recall or spell.

When creating a lexicon, you clas-

sed command system of controlling printer and some format effects, and in most cases has used identical mnemonics for the commands. Thus PL, IL and CE control page length, the length and centring. This is almost very helpful to those coming to *Alpha* from *Wordwise*. Unfortunately, the designers have occasionally, and for apparent reason, used different commands (TB for top space).

Worse still, the manual itself sometimes lapses into the *Wordwise* version (TS), showing vividly how much confusion such small matters can cause. There are also discrepancies between the poster-size summary (a useful if cramped document) and the manual, one showing DN for page number, the other PN. Overall, the User Manual (by Bill Tagg and others) is well written and laid-out, but has a worrying number of typographical errors for something that should be a model of what wordprocessing can achieve. There is also a Technical Manual which includes some tough reading.

Alpha tends to give the impression that it's aimed at people with a computer background. To preview text, for example, you must type OUTFILE CON: which is not the most obvious command. CON, we are told, stands for console, which again is not what primary teachers call their screens, and the colon is crucial. You must then type GO and afterwards OUTFILE LST: if you want to print to paper (LST for listing paper, naturally). To recover enough memory for preview, incidentally, *Alpha* scraps the lexicon (saving it first if necessary) so a lexicon disc must always be in the disc drive.

All three of these wordprocessors have been carefully designed by people with understanding of the educational, as well as technical, constraints. Even more encouraging, all three have been thoroughly field-tested in real schools, and revised as a result of teachers' comments. Each has many commendable features. But the problem for the teacher is that all are incompatible with each other - except in the technical sense that anyone who is willing to mess around with ASCII files and subsequent reformatting should be able to get text in and out of any of them eventually.

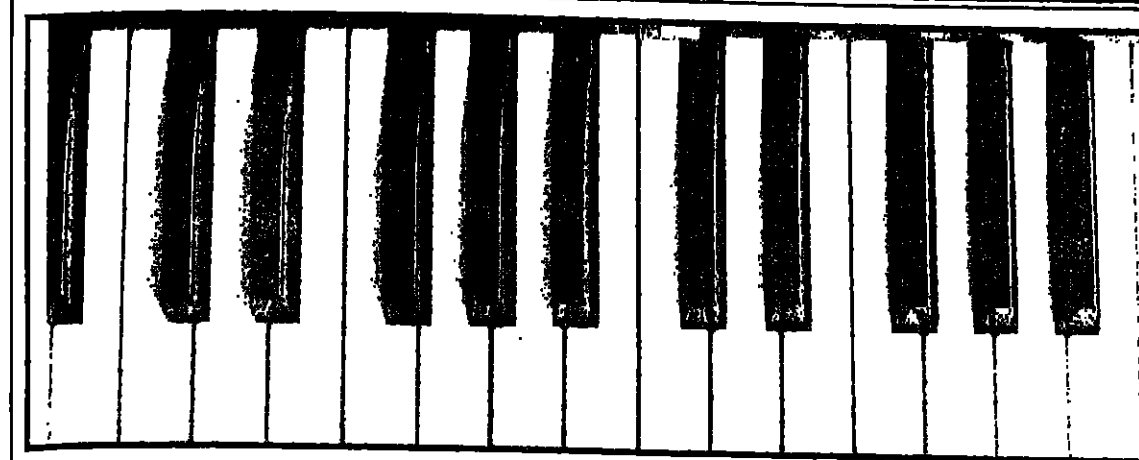
In the real world, however, most teachers find it hard enough to learn one wordprocessor, let alone three or four. *Folio* scores highly because it is so very quick to master and because its screen display and printout are so distinctive. One can readily imagine making fresh converts to wordprocessing among teachers, who may later graduate to *Wordwise* and *Wordwise Plus* when the need arises. In a school already committed to Logotron-style approaches, *PenDown* makes a natural extension into language work.

For written work where format is important, such as children's poems, scores significantly over the embedded command approach used by *Wordwise* and *Alpha*. I am less certain whether the extra features offered by *Alpha* justify the extra effort of learning its unmemorable commands - in many other respects it is akin to *Wordwise*. I was left wondering how many of *Alpha*'s features could not be created by suitable *Wordwise Plus* segments.

Alpha borrows *Wordwise*'s embedded entries using a TAG command, applying different tags for different purposes - for example, words you are likely to mis-spell, words describing the weather and words connected with trains. You can scan your lexicon entries in the order you inserted them or in alphabetical order, and specify Tag to select words to view. The screen functions as a window on your lexicon. To pull lexicon words into your text you have to use the "slate" - a temporary store for text (also needed in cut-and-paste work) that occupies the bottom three lines of the screen while your document or lexicon take up the top 20. First move the word into your slate with the COPY key (*Alpha* supplies capitals and spaces automatically). Soon the slate will fill up and you'll have to copy it into the document.

Alpha borrows *Wordwise*'s embed-

EXTRA REVIEWS



Musical offering

Colin Wells on programs which set out to teach basic music skills up to O level

Music Theory Tutor 1-4
Discs for BBC Micro, £12 each
Music Theory Tutor - Games
Disc for BBC Micro £10
Complete pack £48
from AVP Computing, Hooker Hill House, Chestport, Gwent NP6 5ER.

The set of four program packs for the BBC microcomputer by AVP products entitled *Music Theory Tutor 1-4*, and the associated "games" pack, are claimed to be "carefully structured programs providing a useful source for teaching the necessary skills from the very beginning up to and including O level requirements". They are designed either as a teaching aid, or for use by individual pupils.

Before looking at which of these packages meet this aim, it is necessary to examine the basic needs for theory packages of this type.

For music students working towards O level or Grade V Theory examinations, there has certainly been an emphasis in the past on learning the relevant theory skills, symbols, words or notations in a fairly insular and mechanical manner.

While pupils still need to become familiar with these elements of music, there has recently been a significant move away from "learning about music" to the much more dynamic areas of learning through performing, listening and composing music, ie "doing". Thus, for example, chords and intervals are not studied in isolation, but listened to, played and discussed in the context of a piece of music. Rather than learning about the basic structures of major and minor scales, pupils are encouraged to make music

and listen to music in a variety of tonal systems including pentatonic scales, various modes, scales from different cultures, and even atonal and micro-tonal systems. "Traditional" notation is very often supplemented by graphic scores, reflecting the greater freedom and range of the music being played or created.

In general music education, as reflected in the HMI Curriculum Guidelines and in the new GCSE requirements, now encompasses a much wider and richer spectrum of musical activities than is covered in the "traditional music theory course" and even when the more traditional elements are being studied, it is in a suitable music context and involves practical work, not just theory work.

In this context, this kind of package is now definitely obsolescent. It would need very careful balancing and integration with suitable practical music activities to be of use in today's music classroom.

Having said that, however, the general approach of the package should be briefly considered. There are a number of music theory books readily available, and any use of a computer should improve on these, for instance, through the use of sound or animated graphics.

However, an overall impression of much of the material presented in these computer programs is that it would be better in a book. For example, there are frequently three or four pages of text on the screen before any illustrative sound is heard or interactive test given, and the last section on consonance progresses through many pages of static writing and diagrams with no sound at all.

A written booklet linked to a selection of illustrative examples or tests on the computer would be a much more efficient way of presenting the same information (whereas in fact the accompanying written material is practically nil).

There are a few comments to make on a more specific level. For example, the material states that a musician only needs two pieces of information - what notes to play and how long to play them - whereas music teachers have been trying very hard to get away from this simplistic and mechanical "note and rhythm" syndrome into much fuller musical performance attributes of expression, and communicating emotions and ideas through subtleties of rhythm, tempo, volume and phrasing.

There are also a number of errors, such as quaver tails facing the wrong way in diagrams; a statement that harmonic minor scales are characterized by the interval of 1½ tones between the seventh and eighth notes of the scale (whereas it should be between the sixth and seventh); and the assertion that the harmonic minor scale "sounds better" than the melodic minor scale, whereas the melodic scale was created to provide a more pleasing melodic line.

In conclusion, if one wishes to learn music theory as such, I believe that a good text book with associated explanations and examples would provide a better medium than these packages. One hopes that this kind of approach to music is becoming a thing of the past, and that pupils will increasingly become much more involved in, and excited by, music making as a practical art and not just a theoretical skill.

Name, address, date of birth

by Gorman Stafford and John Tuey

Census
Place Names
40-track disc for BBC Model B
Supplied in one package £15.95 (+50p p&p)
Available from South Yorkshire and Humberside RESOURCE, Exeter Road, Off Coventry Grove, Doncaster DN2 4PY.

Census provides data for four village communities in the West Riding in 1861. It also provides a master census program allowing pupils to enter equivalent material from their own area. Six pieces of information are provided for each individual in each village - surname, Christian name, position in the family, age, occupation and birth place. Thus Harriet Fox is listed as a 40-year-old "scythe forger's wife" born in nearby Hallam.

The information is basic, simpler to use than *Quera* although not as powerful. The possibilities for investigative level pupils can work on names, assessing the percentage of the population with each surname and the popularity of certain Christian names. The population can be broken down into age and occupational groupings.

More complicated investigations could lead pupils into studying the number of pupils per teacher, the usual age for leaving school, patterns of migration into the village, patterns of

to stimulate pupils to research and record data from their own chosen areas. By itself, it provides an excellent introduction to the computer as a retrieval system, although it will have a particular meaning for pupils working on settlement and associated topics. The database is divided into two parts, allowing the user to write a set of up to 50 records of general information on places and a set of up to 100 records of the meanings of parts of place names such as "ton" or "ham". Each record can be retrieved under up to 10 different headings, "brough", "borough" and "burgh" for example each producing the same record. Each record on an individual town may have up to 10 screens of information displayed in large characters, allowing 50 to 60 words per screen.

Both programs are suitable for top junior and secondary pupils. The *Census* one does invite some serious and complicated enquiry and could certainly be used with older pupils. An element of teacher direction in identifying the areas to be investigated will probably be necessary. Both programs allow pupils to handle a substantial volume of information. The guide books are clearly set out and provide detailed instructions, allowing the programs to be used by those with minimal computer experience. A short summary of essential data, listing for instance the total population of each village, would have been useful for

records and prints the meaning of place names and information about them. It also allows some analysis of place names. Although data is provided on eight places in the Sheffield-Rotherham-Doncaster area, the intention is not to provide information but

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Le traitement de texte devient de plus en plus important, non seulement dans le monde des affaires mais aussi dans l'enseignement primaire et secondaire. Il permet aux enfants de "jouer" avec les idées qu'ils conçoivent, et, ce qui est plus important, de perfectionner les histoires qu'ils rédigent. Ils ne sont plus gênés dans leurs activités créatrices par le besoin physique d'écrire - une fois le clavier maîtrisé, ils sont en mesure de présenter des copies parfaites.

This text has been produced by the junior word processor called 'Folio' and printed in 'small columns' on pages of twenty lines per page.

There is a Concept board editor (which has its own keypad) and the processes of creating, testing and saving an overlay are well explained. A street scene is illustrated with 32 words or phrases that the child might wish to call up. There is even documentation to help the technically minded interface *PenDown* to other input devices such as Quinkey and touch-screens. *PenDown* is an exciting new approach to primary wordprocessing, supported by a wide range of professional features. *Alpha* is produced by Hertfordshire's well-respected AUCBE (Advisory Unit for Computer-Based Education), but its presentation looks amateurish by comparison with the previous two. As one would expect from AUCBE, the program is com-

Le traitement de texte devient de plus en plus important, non seulement dans le monde des affaires mais aussi dans l'enseignement primaire et secondaire. Il permet aux enfants de "jouer" avec les idées qu'ils conçoivent, et, ce qui est plus important, de perfectionner les histoires qu'ils rédigent. Ils ne sont plus gênés dans leurs activités créatrices par le besoin physique d'écrire - une fois le clavier maîtrisé, ils sont en mesure de présenter des copies parfaites.

This text has been produced by the junior word processor called 'Folio' and printed in 'medium centred' on pages of twenty lines per page.

EXTRA REVIEWS

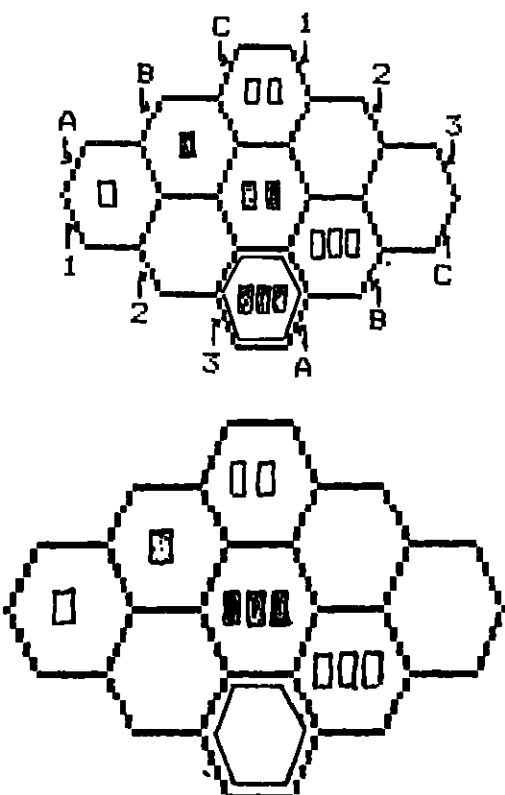
Early Concepts
BBC Model B, B+ and Master
Headway, 4 West Rd, Kirkland,
Frinton, Cumbria CA26 3XX.
Logical All Sorts
BBC Micro £32 + VAT, available in
July
Longman Micro Software, Longman
Group Resources Unit, 33-35 Tanner
Row, York YO1 1JP.
Problems and Investigations in the
Primary School Using the Micro-
computer as a Resource
BBC Micro £6 to ILEA schools, £8 to
others
Published by Hill MacGibbon for the
MEP Primary Project
Additional copies available from
Capital Media, ILECC, John Ruskin
Street, London SE5 0PO.

It is now recognized that the process of learning, rather than the product, plays an important part throughout all stages of education. In the early years, this is evident in the acquisition of underlying concepts which need to be grasped as a prerequisite to logical thinking and problem solving. The three programs reviewed here contribute in different ways to this process.

One of the most effective methods of allowing young children to explore various concepts is through the use of a concept keyboard. It enables effortless input to the computer so that attention can be concentrated upon the task rather than taken up with keyboard technicalities. A recently-released program which utilizes this medium is *Early Concepts*.

Early Concepts is a content-free utility which provides teachers with the means to construct items specifically for individual needs. It is easy to use and flexible and assumes a basically low level of computer knowledge. Thus, an explicit manual guides even a novice through the menu-driven options which include making your own overlays. The program itself provides two main options, "Matching" and "Find It", and its uses are restricted only by the imagination of the teacher. While the sample overlays provided tend to concentrate upon more traditional concepts, the program allows for more meaningful contexts suited to definite situations. Master overlays are supplied for both A3 and A4 keyboards and although there is a great need for this type of program it will have a struggle to compete with the Microelectronics Education Programme's cheaper, much more polished *Prompt 3*.

A set of programs which provides a



Underlying concepts

Pauline Bleach on programs for logical thinking and problem solving

context for practising logical problem-solving skills has been developed by the Loughborough Micro Project. Accompanied by a very comprehensive 30-page booklet, *Logical All Sorts* is "a collection of animated, thought-provoking programs involving different aspects of logical thinking and classifying items into sets, comparing attributes, pattern recognition and prediction of functions". Various sets of shapes form the basis for the activities and sets of cards are also provided with the package for valuable related work away from the computer. In all, six games are supplied, each incorporating a variety of options. The concept behind them is very similar to

that used in *Logiblocks*, but together they illustrate the unique random generation and instant feedback facilities of the computer, used to excellent effect.

There is a uniformity both of material and operation which engenders a sense of continuity and logical thinking through easy stages. At the lower levels the skills demanded are centred upon matching attributes according to pre-set specifications while at the harder ones, quick thinking, sequencing and logical backward tracking are required in combination, to effect a solution. Although at first sight these programs resemble arcade-style computer

games, the more they are used the greater the benefits that ensue. They were intended originally for the 8 to 13 age range, but in practice have a much wider application, from infants through to secondary children, and their flexibility is such that some adults found them quite addictive. The initial outlay for the package is quite high, but once acquired, this set will provide a reusable foundation which will be well worth it.

Again providing problem-solving practice, but with the emphasis more on investigation, is MEP's package *Problems and Investigations 1*. This is the first release of a suite of 10 programs, four of which are included in this set. They have been based largely upon the work of the Bulmershe-Comiso Problem-Solving Project, the aims of which are clearly described in an excellent covering handbook. Separate booklets are supplied for each of the programs.

In *Raybox* the investigation takes the form of studying the behaviour of rays which are fired into the grid of a box which contains a number of hidden atoms. Careful observation enables information to be gathered according to whether the rays strike or fail to strike the hidden objects.

Strategy provides various grids for use inoughts and crosses games, either with a partner or against the computer, but the aim is not so much to win as to teach children how to apply strategy to their play. These strategies are taken a stage further in *Colony*, a more complicated game for pairs or small groups, which builds on the work of the previous games. The last of the four programs, *Hees*, offers a scientific investigation based on the simulation of a working hive.

This is an excellent set of materials, based on first-class assumptions and fulfilling an area for which there has long been a need. It does require a little time and effort on the part of users to understand the background perceptions so that they can be used correctly, but it is well worth the trouble. Its authors, Heaver Glover and Charles Baker, are to be congratulated not only for providing a package which concentrates on the process of learning but also for making it so readily available.

As it stands, the materials can be freely copied but additional packages are available at a low price which everyone should be able to afford. The fifth program, *Tray*, has already been released under the same terms and the remaining five programs will be marketed singly when they are ready. If they are of the same standard as the initial ones, this should be a superb suite. No primary school can afford to be without it.

Witches' brew

Tony Gray reviews educational adventure games for primary and secondary classes

Magic Seeker
Published by Coventry local education authority
Program available free from Manchester SEMERC, Manchester Polytechnic, Hathersage Road, Manchester M13 0JA.
Teacher's pack and 22 keyboard overlays £3.90 from Elm Bank-Teachers Centre, Mile Lane, Coventry CV1.
Quest Adventures
Price £27
Published by MEPAUCBE
AUCBE, Endymion Road, Hatfield, Hertfordshire AL10 1AU.

These two programs are examples of how the adventure game is coming of age as an educational resource. From their origin in the mainframe versions of *Star Trek* in the sixties, adventures are being developed for a variety of educational purposes. Indeed at Loughborough, the Micro Project is currently exploring the use of adventures in the training of production workers for British Coal.

Magic Seeker is designed specifically to introduce this type of program to children with learning difficulties, but could also be used by younger children in primary schools. The story centres on searching a witch's house for magic items and requires a concept keyboard to give instructions to the computer, that it combines and focuses the use of three content-free programs (*Prompt*, *Touch Explorer* and *Line*) to a single

educational purpose. These and *Magic Seeker* itself are available free from Manchester SEMERC, but teachers will need to purchase the documentation, which includes teacher's pack and 22 keyboard overlays, from Coventry education authority. The documentation is "home" produced.

The range and potential of *Magic Seeker* is immense and the pack is put together with commendable thoroughness and clarity. Even if the program were not such good value for money, it would be an excellent resource.

Quest Adventures offers another example of how this type of program has developed. In this case, an adventure generator allows upper primary, middle and secondary school children to create their own adventures at five levels of complexity. The pack is well produced. It comes with excellent teacher's notes, map, prompt cards, two discs and a sample adventure to get you started, but you also need the *Quest* data handling program (a further £27, or £22 if you buy it with *Quest Adventures*).

The range of work addressed by the activity of creating an adventure is immense, and this package could be used over and over again in many contexts. However, the very power of the program makes it quite complex and, at least at first, teachers will need to be prepared to give a lot of time to this activity. If you have already used adventure games in your classrooms and want to extend your work in this area, *Quest Adventures* is for you.

bits

WORD PROCESSING

"Word Processing on the Home Computer" is an independent user guide which provides a readable magazine relevant to teachers who use wordprocessing at home or school. It aims at Amstrad, Atari and BBC owners and contains interesting insights into how the systems differ. One year's membership (six issues) costs £6 from Word Processing, PO Box 67, Wolverhampton.

TYPESETTING

Schools and colleges are getting more and more interested in professional typesetting from wordprocessor disc files. It's cheaper, quicker and more accurate than traditional methods, and has real attractions for school magazines, prospectuses and worksheets. The typeset word has more authority, occupies less space and is more legible than the dot-matrix printed word.

"Typesetting for Micro Users" is an invaluable companion for breaking into this new technology. It helps newcomers to communicate effectively with typesetters, guides them through the concepts and activities and provides a wealth of examples. The book includes model coding forms, an explanation of typesetting terms and an index. It costs £9.50 from Quorum Technical Services, Sandford Park Trading Estate, Cheltenham, GL52 6XH.

CAVING TRIP

In our article on software for reading and language development (Computer Extra, April 11), the price for the program "Caving Trip" should have been quoted as £5.50 for the cassette version and £12 for disc. The program is available from Trekkansoft, 10 Broom Close, Belper, Derby DE5 2TZ.

GAS

Three new computer programs for primary and secondary pupils have been launched by British Gas - "TASK", "PEG" and "CEDRIC2".

"TASK", or "Testing Assessment and Study of Kilchens" helps 14 to 18-year-olds design many different layouts for a kitchen. Children can work out the position and height of kitchen furnishings and then test layouts by simulating practical use.

"PEG", or "Primary Energy Game", encourages 9 to 11-year-olds to win a game in which they save energy in a home, and "CEDRIC2" or "Community Energy Display and Retrieval or Information and Calculation", helps increase the understanding of 11 to 15-year-olds of energy in their homes.

All the programs are available for the BBC Model B and "Cedric 2" is available for RML machines. Further information from MMC Ltd, PO Box 46, Hounslow, Middlesex TW4 6NF.

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EXTRA REVIEWS

Up hill and down dale

Gorman Stafford and John Tuey review simulation exercises for upper junior/secondary pupils

The High Peak Railway Game
Cassette for BBC Model B
Price £9.95
Produced for Derbyshire County Council
Available from South Yorkshire and Humberside RESOURCE, Exeter Road, Off Coventry Grove, Doncaster DN2 4PY.

The High Peak Railway Game offers two distinct simulation exercises for upper junior/secondary pupils working in groups of three or four.

In the first game pupils have to develop a transport link between the existing canal network in the Nottingham/Derby area (at Cromford) and the Manchester/Liverpool system (at Whaley Bridge). Crossing the hills of the Peak District provides the challenge. By making a series of decisions at each stage in the construction of the railway, pupils are given insight into the modes of thought as well as the practical difficulties which lay behind the building of the High Peak Railway.

The initial decision is whether to build a canal, a road or a railway. Would it be possible to collect and store enough water high up on the Derbyshire limestone moors? Would horses be able to pull the heavy wagons up steep hills? Simple logic and a process of elimination leads to the choice of a railway.

Decisions come in rapid succession. What device is necessary to haul wagons up and down Sheep Pasture Hill? How are wagons to be moved along the level sections? Where is the water for the winding horse at Middleton Top to come from? What local industries could also use the line? For each decision pupils select one of the given alternatives. Historically "wrong" decisions are pursued until a reason for their non-adoption is discovered. Getting the "right" answer first time means that it is possible to miss some thinking behind the decision.

In the second game pupils are confronted by the economic uncertainties involved in operating the railway. Each group has eight empty wagons

and is offered wagonloads of goods at each location by the computer. A Tariff Card provides the revenue per wagon per mile for likely cargoes. Cattle earn twice as much income as limestone.

Once accepted, the goods must be transported to Whaley Bridge. Snowdrifts, derailment, subsidence and locomotive failure are some of the hazards encountered. Repair costs are incurred. At Whaley Bridge the computer gives a balance sheet of income and expenditure including a lump sum to cover fuel, wages and maintenance.

This is highly effective material. Pupils respond to it positively. The issues are generally straightforward and students cannot avoid having to think out their positions for themselves. Commonsense will take most a long way. Discussion on the issues arising from the second game can be taken to a high level. Structured workcards, a pictorial guide to the railway itself, a large-scale outline map and teacher's manual are provided. The pack will be of particular interest to those with a knowledge of the area.

Cash 'n' carry

Jacquetta Megarry tries out a new 'Computer Assisted Topic' for the fourth and fifth years of primary

Travelling Shop
Teacher's book with two 40-track discs for BBC Micro
Price £25
Jordanhill College of Education, 76 Southbrae Drive, Glasgow G13 1PP.

Travelling Shop is the second Computer Assisted Topic published by Jordanhill College of Education. Like its predecessor, *Desperate Journey* (TES, 7.3.86), the topic was devised by Fred Rendell and his team at Jordanhill, with computer support designed by Tricia Watterson. The software (14 programs this time) is for the BBC Micro, and it is pleasing how firmly the computer is kept in its place within a framework of extensively field-tested teacher support for topic studies.

Travelling Shop is intended for the fourth and fifth years of primary, and thus extends down the age range from the *Desperate Journey* approach to integrating language and expressive arts with maths and problem-solving. It is equally colourful and child-oriented, though it lacks the strong

storyline of its predecessor. The scenario is a housing estate which the children help to design. The central activities of the topic are stocking, operating and decorating the travelling shops to service this estate.

Each supporting activity is clearly laid out: purpose, preparation, class organization, procedure, discussion points and outcome are listed. Pupils' work is reproduced colourfully and vivid classroom photographs convey what the topic is like in reality.

The programs themselves are attractive - colour, sound and animation are used effectively. The handling of errors is not sophisticated. "Wake up sleepy head" is the repeated response to errors in "Cash and Carry". But the abstract mathematics of division is brought to life when children distribute loads among lorries, using tangible materials, colour coding and screen animation. Overall, the computer programs tend to be simple, but derive their power from being closely embedded in their subject-matter.

Disc one has programs on designing a housing estate, neatly enhanced with a lightpen (optional). There is direc-

tion work using a grid map using a sensibly improved version of the Micropainter program *Crash*. Imaginative written work is triggered off with a structured start, and the Concept board option helps to reduce keyboarding chores here. A very simple list processing program helps them to compose an advertising slogan for the van and there is a program on giving change which also uses the Concept board to good effect. Overlays are provided to suit all the Concept programs.

Programs on the second disc focus on the vans and their customers: loading, stocking and story-making. In "Vans On The Estate" children are given a choice of van, incident and course of action. As the storyline builds up, a simple visual with short-hand captions appears on the screen. Finally, the pupils complete the story in their own words. "Missing Person" supports the children in writing a connected description from a list of physical characteristics. Two utility programs help teachers to change stock items and shopping lists easily.

The software is heavily protected: you can't catalogue the discs normally but have to approach through the Menu (and will have to switch off after using them before using other software). It's also a pity that the list of program titles was not cross-referenced to the book page numbers. Only the program titles and numbers appear in the topic outline.

The teacher's book consists of 98 full-colour A4 pages, each coded as in *Desperate Journey*: blue for background information, green for activities and examples of pupils' work, red for programs. It lacks an index, though page 96 gives a bird's-eye view of the storyline and activities and how they relate to the children's learning.

This attractive and well-designed pack will be followed by *Fantasy Island* for infants later this summer. All the Jordanhill computer assisted topics have full support under the Department of Trade and Industry's software support scheme, making them even better value than they seem.

NEW PenDown from LOGOTRON

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PenDown is a completely new word processing environment for the BBC B and Master Series computers, expressly designed for infant, junior and middle schools. Teachers love PenDown's powerful features, which are fully accessible to younger children.

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At the same time, PenDown can be used by teachers for school correspondence, and for preparing materials to be read by children. The 'jumbo' type face is just like standard primary school printing. Five extra fonts are provided with the pack, together with a delightful font editor which allows you to create your own. Dictionaries and help screens are easily tailored by (non-programming) teachers to the children's needs. A special editor makes the creation of Concept Keyboard overlays a simple matter. The icons on the keypad speak for themselves. There are no embedded commands or control characters.

PenDown comes with six different font styles

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f5 f6 f7 f8 f9
f5 The planner is a powerful tool for lesson planning. Store work and is fully integrated into PenDown.
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f7 Deleting words or blocks of text is easy with PenDown. Words to be cut or highlighted appear.
f8 Create a line of text with a single key. Words can be moved, deleted or inserted.
f9 With the cursor under a letter it will turn that letter into a word.

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PenDown was designed by Peter Hunter, a working teacher from Somerset, on the basis of extensive classroom research for a doctoral thesis into the difficulties and needs of children using existing word processing programs on the BBC B.

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Tel: 0508 230248

EUROCENTRES

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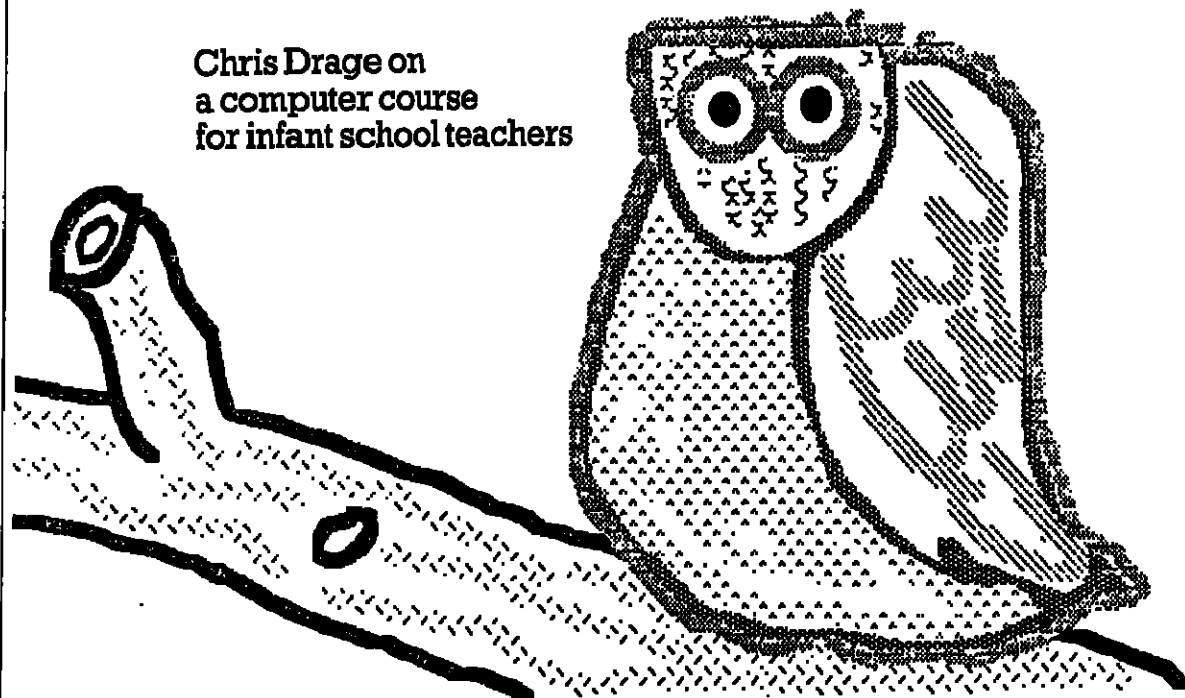
Details from the Cambridge Eurocentre, 62 Bateman St, Cambridge CB2 1LX

Eurocentre is a non-profit-making Foundation teaching English, French, German, Spanish and Italian in countries where those languages are spoken. Also teacher refresher courses in Paris, Florence, Madrid and Cologne.

EXTRA REVIEWS

Tree of knowledge

Chris Drage on
a computer course
for infant school teachers



Infant and First Schools - The Role of the Micro
MEP
For BBC B, RML 481Z (not all the software is available for both machines)
Available from Regional Information Centres and I.C.s.

During the 12 months prior to March and the demise of the Microelectronics Education Programme, we have seen the release of a number of major in-service training packages by the National Primary Project headed by Anita Straker. Although MEP is no more, the materials are freely available through Regional Information Centres and I.C.s.

Following in the wake of successes like *Primary Maths and Micros* and *Language Development - The Role of The Micro*, comes *Infant and First Schools - the Role of the Micro*. This package has been designed to form the basis of a short course for infant school teachers already familiar with the operation of the school's computer system. The pack comprises tutor guidelines with suggested course sessions; OHP transparencies; a set of Bigtrak activity cards with teacher's notes; three discs of software comprising 16 programs, program notes concentrating on practical classroom activities; slides and samples of children's work based on Dragon World; a course reader; a software catalogue; a video showing computer activities and work with Bigtrak; an audio cassette of children working through an adventure program.

What is immediately apparent with this pack is the scope and breadth of the materials. All major areas of computer use in infant schools are covered by 12 thoroughly-planned and well-documented course sessions. The pack has been designed with flexibility in mind and the guidelines aim to illustrate one possible course.

The accent of each session is on

practical application in the classroom which is most welcome, as in my experience teachers complain that some courses are too esoteric and divorced from the realities and practicalities of the classroom. Areas covered include Bigtrak, Turtle graphics, adventure programs, word and data processing, pre-computer activities and alternative input devices.

The software, provided on three discs, is very well chosen indeed, providing excellent examples of each

area of computer use. With one exception, "Cartoons", the software is freely copiable by course members, thus providing a school with a substantial base from which to build - in both human terms and resources.

Disc 1 contains the type of program which is becoming increasingly common. "Jumbo", "Treasure Hunt", "Puzzle Farm" and "The Lost Frog" are all adventure games in various guises. "Bricks" and "Mosaics" share the theme of matching. "Play Train"

and "Toyshop" are examples of puzzle/strategy games. Disc 2 comprises programs which are powerful tools to be used in the classroom as an additional resource. "Ourselves" and "Our Graphs" enable children to store information, to interrogate it and to display it on a graph.

It was pleasing to discover that both these programs integrate well with the popular "Picfile/Facfile" database programs which children will use further up the school. "Infant Tray" is a

scaled down version of the mature and well-established "Developing Tray" cloze procedure program. "Writer" is a simple wordprocessor offering young children a simplified range of word processing facilities.

Disc 3 contains a rather novel program from Newman College, Birmingham. Entitled "Cartoon", it allows children to create a story or documentary on the computer, later to record it on video tape, adding a sound track. The cartoon comprises a sequence of animated Mode 7 (teletext) screens which may be linked by the children in one of many combinations possible. The sequence is saved to disc, then transferred from a BBC Micro to a video recorder where a sound track may be added. Children may add a title screen of their own, using the teletext editor supplied. This is exciting stuff.

However good, the software provided is by no means exhaustive and additional software is required to give further substance to the topics covered in the course.

I would recommend every primary teacher to obtain a copy of the course reader. It contains a number of thought-provoking and helpful articles by practising teachers and specialists. Each article is informative and practical. There is a wealth of ideas in this one booklet.

Infant and First Schools - The Role of the Micro is one of the most important INSET initiatives in recent years. Those responsible for in-service and teacher training would do well to give more than a cursory glance at this excellent set of materials. The issue raised by this pack is whether or not similar materials, of equal quality, will be developed and made available under the auspices of the newly formed Microelectronics in Education Support Unit. It would be a tragedy if initiatives of the order of these materials were to remain a memorial to the Microelectronics Education Programme. Where the National Primary Project began let us hope the MESU will continue.

Useful?

Choosing And Using Your A Level Subjects
Disc for BBC Micro, Tutor's Notes, 10 Student Workbooks plus one copy of *Your Choice At A Levels*, £45 (Special price £32.50 until July 31, 1986)
CRAC Publications, Holsons Ltd, Bateman Street, Cambridge CB2 1LZ.

CRAC has introduced a new computer program in the *Careers on Computer* series called *Choosing And Using Your A Level Subjects*. The program is hierarchical in four parts - first, subjects and related further/higher education courses; second, subjects and career requirements; third, combined subjects and related careers; fourth, careers and their related subjects.

The program itself consists of a list of 62 A level subjects from which a choice is made. The program lists some of the higher education courses linked to the main A level subjects. The user can therefore choose an A level subject and see which courses are linked to it. Two hundred careers and related A level subjects are categorized under the headings Required, Preferred - Useful. The Careers Library Classification Index category (CLCI) is also given. Finally, the user can choose a maximum of four A levels and their related career opportunities.

The program is simple and straightforward and takes about 10 minutes to run through. It is limited to the student workbook assignments. The limitation of the program is that it does not give enough detail about specific A level requirements for particular jobs and careers. For example, under advanced science, the "preferred" A levels are listed as Business Studies, Design, Art and History of Art. Shown as "useful" are Philosophy, English Literature and Computer Studies. Nothing is listed as "essential". Under the subject/career related menu, Graphic Communication is shown as being "useful". This most of the 200 careers covered. This might confuse the student user.

While the program is a helpful introduction for those students embarking upon A level choices, it is inadequate and possibly misleading for students who already have prior knowledge. Also, there are some curious references: A level Welsh is apparently "useful" for nothing, for example.

Of the four packs reviewed only *Chemical Collisions* shows a concept which could not be illustrated simply by other means.

Richard Evans

Mixed reactions

by L Yarde

is pressed to mix the particles and to start the reaction.

A numerical display is shown of the amount of overall collisions and the effective collisions and the reaction is timed. At each collision a beep indicates whether it is an effective collision or an overall collision. This draws the user's attention to what is going on. A graphical display of the particles is shown as the reaction proceeds.

Stage three extends the idea of reaction kinetics and the order of reactions. It illustrates an elementary bimolecular reaction which is described by a second order rate law.

A booklet gives good, clear instructions on how to use the program with examples. For the pupil a series of questions are provided for each stage and a memory aid is available if the teacher requires to memorize a particular display or series of displays.

The ITMA collaboration pack consists of three Chemistry programs: *Chempi*, *Balanx* and *Molcol*.

Chempi provides information on atomic structure and periodicity, which is suitable for both O level and A level students, though its points could all be illustrated by other means.

One choice shows the atomic structure and indicates the build-up for the first 36 elements in the periodic table. The building up of each electron in the shells is shown by continually pressing the space bar until the element is reached. At this point additional information is given, such as the element's atomic number, oxidation state and group. The second choice shows a graphical display of isotopes of selected elements and the third choice gives a property display of individual elements, groups or periods.

Balanx illustrates chemical equilibrium and can be used at all levels. The display itself is rather disappointing but the information obtained can be used to work out such factors as the equilibrium and the order of a reaction for A level students. The pictorial representation shows reactants A and B, and products C and D, as the

reaction proceeds, the quantities within the beaker change, notably the amount of the product. This is accompanied by the numerical values of A, B, C and D. At the point where equilibrium is reached, change can still be seen taking place with the reactants and products, it is a state of dynamic equilibrium. Other factors illustrated by this program include the effect of concentration on equilibrium and temperature effects on rate.

Molcol serves as a companion program. It illustrates how reactions may follow from random molecular collisions and how these may lead to a dynamic equilibrium. The pictorial presentation shows colliding molecules, some of which result in a reaction and others which do not, depending on their combination. The basic idea is similar to that of *Chemical Collisions* but it lacks interest and excitement. It offers no pictorial presentation of the decrease in reactants and increase in products. It does, however, indicate that once the products are formed it is possible for them to collide (reversible reaction) and produce the reactants - this is not shown in *Chemical Collisions*.

The chemistry pack from Prisma consists of two programs, *Rates* and *Cells*. Both are for A level students who must have a good background knowledge of the two topics.

Rates is designed to enable the user to obtain information about a reaction from kinetic data. It is intended to complement most modern A level Chemistry courses. By following through a series of steps, the user finds out about the order of a reaction, determination of the rate constant and determination of the activation energy.

Throughout each sequence questions are asked and the user must give the correct answer before going on to the next stage. Failure to do so after two attempts results in the answer being given and another attempt being made in a new situation. The program itself provides good support for the teaching of rates by giving various examples for the user to try.

Cells follows a similar pattern. Again the user needs a good understanding of the subject to be successful. The booklet gives useful background information about each topic but the instructions could be made clearer and simpler.

Of the four packs reviewed only *Chemical Collisions* shows a concept which could not be illustrated simply by other means.

Richard Evans

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Breaking the humanities mould

Hugh David looks at Coventry's system of half-term course units



A fully-modular curriculum could conceivably transform a secondary school into a "post-14 Open University".

The quart into a pint pot syndrome is a crippling curriculum development in our secondary schools, according to Mr David Maund, educational adviser in Coventry. Pressures on time are so great that any curriculum innovation, however desirable, necessarily has either to push out something already there.

Mr Maund is hardly the first to draw attention to the situation, but he is among the pioneers in doing something about it. While London schools are adapting examination courses to a credit system based on half-termly units, as suggested in ILEA's 1984 Hargreaves report, *Improving Secondary Schools*, in Coventry Mr Maund and a team of teachers are already piloting a course designed to break the inflexibility of the current system.

It grew out of their worries that in many schools pupils choosing "Humanities" as a fourth and fifth-year examination option are currently getting nothing of the kind. Not only do they have to make a further choice between studying history or geography within that option, unless they are extremely lucky in their schools they will go through the whole course learning nothing at all about the related disciplines of business studies and social science. This is quite unacceptable, says Mr Maund. "There are certain ideas about the world which all the children have a right to be acquainted with, and without which they are severely disadvantaged as citizens."

His solution, devised in collaboration with a working party of Coventry teachers, is a fully modular Humanities course for fourth and fifth-form pupils which reinstates the full range of Humanities as part of the core curriculum and ensures that children have access to it as a right.

Based on similar geography course which has been running in the city for the past 10 years, the pilot scheme has been accepted by the local Midland Examining Group and introduced into four schools, the largest being the 10-form entry Common Court comprehensive school. At present, it divides the total Humanities syllabus into seven "modules". Traditional geography becomes Urbanization and Development, history is represented by modules focusing on Modern

World Studies and Industrialization, while the social sciences supply the remaining three - Power and Politics, Producers and Consumers, and Socialization. Schools and pupils opting for the course must choose five modules, one each from the areas of history and geography, two from social sciences and any one other.

Each module is separately examined through a combination of teacher-marked continuous assessment projects and an "informal" one-hour test (although this system will be simplified and streamlined as and when the course is adapted for GCSE). There is also an extensive moderation process, both within and across the four participating schools.

And all that is just the start. Although the pilot study has been running only since September 1985, there are already plans to extend the course with the addition of further modules on Business Studies and Social Stratification, and the suggestion that all these supplementary blocks would link very neatly with a module scheme for TVEI.

But although he is delighted to have got the scheme running at all, as an educationist rather than a subject specialist Mr Maund is under no illusions about it. It is still only a modular course;

nothing like the fully modular curriculum which he would like to see developed.

Privately, he foresees a time when that will be the norm in many secondary schools. Pupils would then be able to plot their own curriculum, choosing the most appropriate modules from a whole matrix of subject options.

The introduction of such a system would obviously have radical implications on school organization. Mr Maund believes that under it there would no longer be any reason for pupils to be taught in ability bands or even year groups. Modular accreditation would also allow them to take modules spaced over a longer period of time than is possible at present, and even to return to education after leaving school to complete or conceivably start studying a cluster of modules.

Quite simply, he sees the fully modular curriculum transforming the secondary school into "a sort of post-14 Open University" - something which Coventry has already advocated in its controversial consultative document, *Comprehensive Education for Life*.

All that, however, lies a long way in the future. At present, even the City's existing modular humanities course is a comparatively primitive

beast. For example, it remains stubbornly school-rather than pupil-based. The immutables of staffing and resources mean that pupils are directed by their schools into following particular modules rather than having a completely free choice.

Despite such problems, the advantages have already been highlighted by the experience gained in Coventry, as well as in Clwyd, where Abergele School is already operating a TVEI scheme based on nine-week modules - and other authorities operating modular courses.

In Coventry these advantages accrue to both pupils and teachers. For pupils, it means that they come into contact with a wider range of ideas and can appreciate the connections between them. The combination of an end-of-course examination and continuous assessment over the two years has also been found useful: the setting of short-term goals for continuous assessment projects creates high pupil motivation.

Potentially more advantageous still, says Mr Maund, is the flexibility which modular working gives to teachers. Comparatively small-scale courses such as Coventry's modular Humanities project don't disrupt staffing or the timetable, since they occupy only "one subject's worth" of teaching time. They do, however, preserve the often jealously-guarded subject expertise of staff while at the same time allowing for considerable professional development.

Mr Maund sees this as especially valuable. He is full of praise for his Coventry team who devised and wrote the Humanities course in only two years, working for just half a day a week. "There is enormous potential for fragmentation if things are not carefully organized," he says. "Modular courses put effective school management at a premium, but they also bring teachers right back into the centre of things. They are teaching their own courses and examining on their own criteria. That must have an effect on their own self-esteem and motivation if nothing else. It would be very wrong to see the modular curriculum as an easy option, achieving and meeting running, it can be fraught with problems. But once it is working there are far more winners than losers."

Fundamental contradictions

The exciting opportunities offered by the GCSE sit awkwardly with the new political constraints upon teaching, Don Salter argues

encapsulates the idea - so obvious yet so absent in teaching and learning - with neatness and wisdom.

When one attempts to assess or examine, however, the brightness disappears. It becomes a depressingly familiar story of deciding how many angels can stand on the head of a pin. All right, Society must know what a grade E actually means in performance objectives. So teachers have to spell it out. This is what the Secondary Examinations Council has tried to do in their *Draft Grade Criteria for English*.

The attempt is about as brave or wholesome as it could be. The grade criteria are introduced with good sense, echoing much of the *English* booklet. Yet the problem remains: how are teachers to translate these good intentions into "grade-related criteria"?

The good thing about the document on grade related criteria is that it doesn't come up with checklists of objectives, of the kind which attracted some 800 overwhelmingly hostile responses to the HMI's *English 5-16*. The authors are to be congratulated on that, and it is perhaps ironic that without the discredited and lampooned *English 5-16* the criteria might have been much narrower and more peremptory.

But the difficulty of assigning accurate grades to highly individual work will be greatly increased by the variety of those individual responses. At least with the "scholarly" essays there was a match between classroom activities and what was demanded on the exam paper. With the GCSE, the risk is that teachers will find it impossible to grade imaginary diaries, imaginary interviews with the Ancient Mariner alongside some conventional essays and will either give up the attempt to introduce "a range of tasks" or will reduce the scope of those tasks by heavy direction.

The precedents for success are not good, especially in the present political climate which is demanding more and more centralized control of what teachers do. If teachers were to be left to themselves, by self-regulation like, say, the City of London, to devise ingenious forms of assess-

ment which match the ingenious and imaginative work of students, then there might be a chance of success.

The Government's Assessment of Performance Unit originally intended to assess pupils' language in the widest possible way by encouraging pupils to bring into school any piece of writing done for any reason. This was dropped as impossible in practice and the intention to measure "valuable models" based on the range of language activities which occur in good practice in schools, was modified in the interest of national testing and sampling into a much narrower test of activities.

The move towards teacher appraisal and teacher "accountability" is likely to favour standardized tests of teachers' grade-related performance above the quality of the pupils' learning and the quality of the teacher-pupil relationship. The London borough of Croydon has already begun appraising teachers on the basis of pupils' performance. As *The TES* reported (December 2 1983):

"The pupils' scores on the maths and English tests will be evidence to pinpoint poor schools and teachers. 'If the quality of teaching or leadership in a particular part of the school is inadequate, that particular person has got to be removed', the director [of education, Croydon] said."

Nobody wants inadequate teachers to remain, naturally, but the effect on most teachers is likely to be one of threat in which they look first to their grades and their criteria, and only secondly, if at all, to the exciting variety of what students are doing. Assessing "scholarly essays" is likely to be simpler and safer and less a matter of disagreement between teachers and the director of education than poems or diaries about the Ancient Mariner's psychological problems. The pressure to survive in a time of reduced resources, redundancy and redeployment is likely to stifle innovation.

The evidence that the DES is committed to variety and innovation is flawed and ambiguous.

Sir Keith Joseph, addressing the Institute of Directors in March 1982, said, "schools should preach the moral virtue of free enterprise and the pursuit of profit". History should be more patriotic, according to Sir Keith, and English should be concerned more with standard English than with the dialects of linguistic minority groups.

Professor Denis Lawton, director of the University of London Institute of Education, has surveyed Sir Keith Joseph's pronouncements and is concerned that his phrase "clearly defined objectives" actually means "reducing all subjects to a checklist of skills". Given that anxiety, and the graded testing in Croydon, there is more than a little menace in the bland assertion of *Better Schools* that: "There is widespread acceptance of the view that broad agreement about the objectives and consent in the school curriculum is necessary for the improvement of standards". (DES March 1985).

Sir Keith Joseph thought that broad agreement is necessary and said what his beliefs were. But there is little evidence of a consensus among teachers, and the "consultation" process towards the general and specific criteria of the GCSE has been, in the view of many teachers, rushed and inadequate.

The problem for the GCSE, therefore, comes not only from the contradictions inherent in applying agreed criteria to a richer and more divergent range of students' writing and talking than has so far been offered; it comes also from the political constraints being placed upon teachers as part of the "production line management" vision of education currently being fostered by the DES. "People must be educated once more to know their place," said a nameless official of the DES. "Knowing one's place" in the curriculum struggles the very forms of inquiry that the GCSE is designed to promote.

Don Salter is lecturer in English in Education at the School of Education, University of Newcastle upon Tyne.

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part-time
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teacher for this Group
Nursery School.
Application forms and
Director details from the
P.D.C. 3919 Education, Ref
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(S.A.E.) Reading RG2 9X
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apply.
Closing date: 30th June
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NURSERY SCHOOL
Hawking Road, Bedford
MK42 8JL
Tel: Bedford (0934) 54788
Required for September
1986, a section of teacher,
scale one to work with
groups of children and help
with the development of a
multi-cultural curriculum.
The teaching experience of a
second language experience
would be a recommendation.
Further details from the
Headmistress, see please.
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opportunity employer, and
welcomes applications from
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groups, disabled persons and
all other sections of the
community. 10022

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 Reading RG3 3LJ
 NOR: 130 80 P/T Nursery
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 Scale 1 teacher for the
 Nursery Unit. Nursery, in-
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 Art, Craft and Drama a
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 and names and addresses of
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 ployer. (17496) 10002

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CHILD NURSERY UNIT
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Maidenhead SL6 3AT
N.H.S.

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to suit a full time residential
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charge of the unit. The Teacher
should be able to work well as
a committed member of a team
and be able to contribute to
development. Candidates are
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details available from the
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HIGHFIELD NURSERY
SCHOOL**
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AL5 4RX
Read: Mrs. J. P. Wright
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soon as possible) enthusiastic
nursery teacher (scale 1) for 4
P.T.E. Nursery School.
Applications with c.v.
names and addresses of two
references to the Headteacher.
Visits welcomed, s.a.e. please
(17928) 10092

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SCHOOL
317 Portobello Road, London
W10
Tel: 01-968 2664
Requires from September
qualified infants Teacher
Knowledge of Spanish helpful
but not necessary.
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Brooke (1-7 p.m.) for details
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 Newark, Notts. NG22 9JE
 Roll: 150 (including Nursery)
NURSERY TEACHER
 (Male)
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 is required for September R.C.
 preferred.
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Tel: 35127
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enced Nursery trained
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able from the Head Teacher.
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SCHOOL**
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Woodhouse, Kirkby in
Ashfield, Nottingham NG17
8BW
Roll: 249 (including Nursery)
NURSERY TEACHER (Scale 2a)
An enthusiastic and experienced
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September to be responsible
for the educational develop-
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Nursery.
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(a.s.d.) from the school.
An Equal Opportunity Em-
ployer. (17768) 10008

TW1 BRP
Tel: 01-977 5971
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EMPLOYER
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SCHOOL
Greenleaf Road, E17
Head Teacher: Mrs M. W.
Hollist
REQUIRED FOR SEPTEMBER
1987
A nursery teacher required for
40 f.t.e. nursery
and 11 places Outer London
Allowance and Social Priority
Allowance.
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details) available on receipt
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Old Kent Road SE17 1HJ

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Please send footsop s.a.s. for application form and further details to the Chief Education Officer, P.E.R.P.S. (TS10), Room 282a, County Hall, London SE1 7PB. Closing date for the return of completed forms 27th June.

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Baldwin's Gardens, Holborn EC1N 7SD. Tel: 01-242 8586

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Vacant 1st September 1986. Roll 126. Burnham group 3 plus Inner London Allowance.

The post will suit a committed Christian interested in promoting contacts with the local community and St Alban's Church, Holborn.

Application forms and further details available on request from the clerk to the governors, Mr R. Molock, 26 Langdon House, Leather Lane EC1N 7TN. Closing date for the return of completed forms 27th June 1986. Visits welcome.

ST ALBAN'S CE (JM&I) SCHOOL

Enford Street, London W1H 1DL

Headteacher required for this post which will become vacant on 1st September 1986, following the appointment of the present holder to a larger school. Roll 190. Burnham group 4 plus Inner London Allowance. Applicants should be practising communicant members of the Church of England.

Further details and application forms obtainable from the clerk to the governors, Mr L. D. Clark, 55 Colindale Lane, Hendon, London NW9 8DP. Closing date 27th June 1986.

ILEA IS AN EQUAL OPPORTUNITIES EMPLOYER (01283)

NURSERY EDUCATION continued

RICHMOND UPON THAMES

LONDON BOROUGH OF RICHMOND UPON THAMES

(An equal opportunity employer)

ARCHDEACON CAMBRIDGE'S CE JM/I

The Green, Hampton Road, Twickenham TW25 2TU

Tel: 01-894 4777

SCALE 1 NURSERY

TEACIE, plus Outer London Allowance

Required from September 1986 or January 1987, a full-time nursery teacher to be responsible for the nursery class in this modern, Church of England Primary School.

A person of Christian commitment preferred.

Applicants are welcome to visit the school by appointment with the headteacher.

Forms (footsop s.a.s.) from the Director of Education, Education Department, Twickenham TW1 3QB, returnable to the Headteacher at the school by Tuesday 24th June 1986. 100026 (16087)

SALFORD

CITY OF SALFORD EDUCATION DEPARTMENT

WINTON NURSERY CENTRE

Brindley Street, Winton

Required for September, 1986 or as soon as possible thereafter, at this purpose built Nursery Centre.

Please send s.a.s. for application form and further details to the Chief Education Officer, Education Department, Chapel Street, Salford M3 5ET.

Applicants should be practising communicant members of the Church of England. Closing date for the return of completed forms 27th June 1986. 100026 (16166)

TOWNSEND (JM&I) SCHOOL

Old Kent Road SE17 1HJ

Vacant 1st September 1986. Roll 129 plus 10 i/t and 30 pt nursery. Burnham group 3 plus Inner London Allowance.

Please send footsop s.a.s. for application form and further details to the Chief Education Officer, P.E.R.P.S. (TS10), Room 282a, County Hall, London SE1 7PB. Closing date for the return of completed forms 27th June.

ST ALBAN'S CE (JM&I) SCHOOL

Baldwin's Gardens, Holborn EC1N 7SD. Tel: 01-242 8586

There is a vacancy for a headteacher to take charge of this inner city, multi-ethnic school.

Vacant 1st September 1986. Roll 126. Burnham group 3 plus Inner London Allowance.

The post will suit a committed Christian interested in promoting contacts with the local community and St Alban's Church, Holborn.

Application forms and further details available on request from the clerk to the governors, Mr R. Molock, 26 Langdon House, Leather Lane EC1N 7TN. Closing date for the return of completed forms 27th June 1986. Visits welcome.

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Headteacher required for this post which will become vacant on 1st September 1986, following the appointment of the present holder to a larger school. Roll 190. Burnham group 4 plus Inner London Allowance. Applicants should be practising communicant members of the Church of England.

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ILEA IS AN EQUAL OPPORTUNITIES EMPLOYER (01283)

Primary School Education

Headships

AVON COUNTY

SCAVENHOR'S VJ JUNIOR SCHOOL

Scavenhor's Lane, Larkhall, Wiltshire BA14 6JL

Required for January 1987, a full-time primary school teacher to take charge of the school. Roll 100. Burnham group 3 plus Inner London Allowance. Applicants should be practising communicant members of the Church of England. Closing date for the return of completed forms 27th June 1986. 100026 (16166)

AVON COUNTY

BISHOPSWORTH CE VC JUNIOR SCHOOL

Blindley Close, Bishopsworth, Wiltshire BA14 6JL

Applications are invited for the headship of this school. Roll 100. Burnham group 3 plus Inner London Allowance. Applicants should be practising communicant members of the Church of England. Closing date for the return of completed forms 27th June 1986. 100026 (16166)

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AVON COUNTY

67

SURREY
EDUCATION COM.
ST. STEPHENS C/O
100 MIDDLESEX C/O
Hunters Chase, South
Godalme RH9 5HF
Tel: South Godalme
SCAEC 1 First sec
required for Janu-
before if possible,
should be interest
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Applications fr
dated 15/10 are
MUSIC and are
current members of
England preferred
Admission
or details from the
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WYNTLEAF COURT FIRST AND MIDDLE SCHOOLS
CR3 9AA
Tel: 01-660 2062
TEACHERS
Teacher required for school class for one hour 15 min.
Teacher on 15 min.
Application form details from tel: (17067)

SURREY
EDUCATION COM.
COURT LODGE CO.
MIDDLE SCHOOL
Sangeria Drive, Horsham
Tel: Horley 782839

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SCHOOL**

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 Surrey SM5 3AF
 Closing date:
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SUTTON
 LONDON BOROU
 SUTTON
 ST. CECILIA'S H

SCHOOL
London Road, No
SM3 9DL
TEACHER - SCAT
Required for Sept
an enthusiastic
Catholic teacher
reception/low
Application is
from the DfE
EDUCATION, The
station, Surrey S
S.W.6. Closing Da
1986. (17083)

ue, Clwcheth, Warrington WA3 4JQ. Tel:
8 1250.

Figure 1. The effect of the concentration of the polymer solution on the surface free energy of the polyimide film. The concentration of the polymer solution was varied from 0.5 g/dl to 1.5 g/dl. The surface free energy of the polyimide film decreased as the concentration of the polymer solution increased.

EALING
LONDON BOROUGH
Education Service
ACTON HIGH SCHOOL

Gunnembury Lane, Acton,
London W3 9EY
ENGLISH TEACHER SCAL
"CRACK" REPLY
Required for second line
Autumn Term 1986 (27th O
ber) for two terms to co
material (rave) a term
English teacher for
multi-ethnic compreh
High School. The recent in
duction of community stud
is intended to an exte
The successful candidat
be required to teach at
CEE and City and Guilds le
and be involved in Collab
work using techniques
the 2nd and 3rd year sup
Opportunities will also
to gain experience with
CPD and VET awards.
A genuine commitment
multi-cultural education
essential.

Application forms from
Chief Education Officer,
ley House, 79-81 Uxbr
Road, London W5 5BU to
returned by 27th June
(8AE). (18550) 132

EAST SUSSEX
MARGARET HARDY RCH
Ladies Mile Road, Brighton
Surrey BN1 6P
Gloria Comprehensive, 11-
Roll: 780
19 September: Teacher
English (Scale 1). Applicant
from Teachers seeking a
appointment will be con-
sidered.
Relocation grants
applied for success.
Application (forms
please) from and returnab
the Head Teacher,
(19698) 13

Comprehensive School for 13-18 (Conducted by the Society of Jesus)
Roll 740. Roll expected increase to 1100 in 1987
the Lower School (11-13)
the Upper School at T

ENFIELD
LONDON BOROUGH OF ENFIELD
ST. IGNATIUS COLLEGE
(LOWIS SCHOOL)
Enfield Road, Enfield EN2 6JH
Under the direction of the
Society of Jesus. Likely to

Temporary post for one
London Allowance.
Apply immediately by letter
to the Headmaster with a
two referees.

ENFIELD
LONDON BOROUGH OF
ENFIELD
SALISBURY SCHOOL
Cuckoo Hill Lane, London
SNR
Roll 930

Required September
teacher of ENGLISH. Se-
to join a thriving depart-
ment. It will be an opportu-
nity to teach the subject through-
out the age range. Salisbury
expanding school which
greetes a small number of
physically handicapped pupils.
Small classes. The posi-
tion suitable for newly-
qualified teachers or those

SAE) obtainable from, be returned to, the Head as soon as possible. An equal opportunity

player. (1978)

GLOUCESTERSHIRE
See display advertisement
Page 81. (1978)

HAMPSHIRE
HAMBLE SCHOOL
Satchell Lane, Hamble
11-18 Comp mixed
English. First to
appointments welcome.
Letters of application
full c.v. names and ad-
of two educational r
and a.a.s. to the Head.
(18898)

HAMPSHIRE
PREMIARY COMM

BRIDGMAN COMMUNITY
SCHOOL
Wych Lane, Bridgman
Gosport PO13 0JN
11-16 mixed Comprehensive
Roll
Required September
Scale 1 permanent
ment of English.
A qualified English
to join the Commu
Team at this school
must be able to
ages 11-16 across the
range, but have the
ability to teach in the
years is an advantage.
Applications in
names/addresses of the
national referees to
telephone 01329 711111
(1989).

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

All advertisements are subject to the conditions of acceptance of Times Newspapers Ltd, copies of which are available on request.

ESSEX
STER HIGH SCHOOL
g
Road, Chichester
1, 1220 on roll, 179 in
1, 13-18 summer
September, 1986
Teacher of Geogra-
m 11 to offer subject
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S.R.O.
133622

SSSEX
LD SCHOOL
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RD14 9RT
September 1986. a
OF G COGRAPHY
each across the spa
range. Avery Hill
G Geography 1A-19
taught in the upper
and Teacher, J.A.E.
5192) 105622

SSSEX
COMMUNITY
aret Road, Hfield,
Sussex
18 comprehensive
-Scale 1
for September, new
of strong 'New

team. History in
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stem. Two syllabus
ffered to GCSE -
and Stuarts' and
swers in 20th Cen-
ure will be opportu-
nity to teaching cover-
an 19th century and
ury History. The doc-
has a suite of

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educators.

Following primary
Cornwall.
to 4th July, 1986.
available on receipt of
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BA.
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Cornwall

93

MLEY

1) 1967 School,
Hills Road, Orpington,
Kent SE5
2) September 1984, or
1987, a temporary
teacher of Music
3 hours, to assist in a
and successful depart-
in this 3 hour role
in selective school. An in-
in practical classroom
a selected subject
and. Examination
level
3) 1988 The school
established. The mul-
ticultural approach
and the School has two
of these themes, a
a bens and recorder
Scale
4) 1989 On receipt
of application, in-
names and addresses
is referred to refer-
ees at the school by
date 1986.
5) 133822

Teachers of

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form and details to
47 Tiersdenville

CM1 1LD.
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SEX
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East Sussex

**Full-time
of:**

culars available from the
ane, LEWES, East Sussex

**EAST SUSSEX
COUNTY
COUNCIL**

**COUNTY
MUSIC
CENTRE**



East Sussex

**An enthusiastic full-time
qualified teacher of:**

CELLO

is required from September to teach in schools and assist
with work at a Music Centre in the Hastings area of the
County. Ability to drive a car is essential — Scale 1 post plus
travelling expenses. The successful candidate will join a
large team of Instrumentalists in an exciting new phase of
development. Relocation grants available in approved cases.

Application forms and further particulars available from the
County Music Centre, Watergate Lane, LEWES, East Sussex
BN7 1UQ (foolscap SAE please).

SECONDARY MUSIC

continued

CAMBRIDGESHIRE

EQUAL OPPORTUNITY

EMPLOYMENT

STANTON SCHOOL

Stanton, Cambridgeshire, Cambs.

Head Teacher: Mr. B.C. Parker, M.A., M.Phil.

11-16 Co-educational

Group 11

Required for September, 1986 or as soon as possible

Detailed application forms

Scale 1 Music teacher for

this school. The school has

a comprehensive range of

1,300 pupils. Ability to teach

up to 10-15 classes desirable.

Good piano qualifications im-

portant. Please apply by letter

enclosing curriculum vitae and

two references direct to the

Head Teacher, enclosing full

address immediately. 133822

(19785)

DEVON

COUNTY COUNCIL

Please see displayed adver-

tisements on Page 75. 133822

(19785)

DORSET

AVONBOURNE SCHOOL

Haweswood Avenue, Bournemouth B9 4JY

Head Teacher: Mr. J. Mitchell

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

activities according to the

school's needs. Further infor-

mation and application forms

available from the Head-

teacher. Closing date for

applications: Monday, 30th

June 1986. 133822

(17850)

DUDLEY

METROPOLITAN

Equal Opportunities

Employer

MONSIEUR SCHOOL

111, West Hill Road, Dudley, West Midlands DY1 3SR

12-16 Co-educational

Group 11

For September, temporary

TEACHER OF MUSIC

(Scale 1) to cover maternity

leave. Details of application

forms and curriculum vitae

should be sent to the Head

Teacher, enclosing full

address immediately. 133822

(17850)

EAST SUSSEX

FATCHAM FAWCETT

School, Fatcham, Brighton BN1 8TE

Head Teacher: Mr. J. Mitchell

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

activities according to the

school's needs. Further infor-

mation and application forms

available from the Head-

teacher. Closing date for

applications: Monday, 30th

June 1986. 133822

(17850)

ESSEX

HASENBROOK

Comprehensive School, Hasenbrook, Stansted, Essex SS17 0NS

Head Teacher: Mr. J. Mitchell

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

HAMPSHIRE

PERIN'S COMMUNITY

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

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teacher. Closing date for

applications: Monday, 30th

June 1986. 133822

(17850)

HOUNSLOW

CRANFORD COMMUNITY

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

activities according to the

school's needs. Further infor-

mation and application forms

available from the Head-

teacher. Closing date for

applications: Monday, 30th

June 1986. 133822

(17850)

LONDON N16

OUR LADY'S CONVENT HIGH

School, 6-16 Ashurst Park, London

Head Teacher: Mr. J. Mitchell

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

activities according to the

school's needs. Further infor-

mation and application forms

available from the Head-

teacher. Closing date for

applications: Monday, 30th

June 1986. 133822

(17850)

LONDON N16

OUR LADY'S CONVENT HIGH

School, 6-16 Ashurst Park, London

Head Teacher: Mr. J. Mitchell

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

activities according to the

school's needs. Further infor-

mation and application forms

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mation and application forms

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teacher. Closing date for

applications: Monday, 30th

June 1986. 133822

(17850)

LONDON N16

OUR LADY'S CONVENT HIGH

School, 6-16 Ashurst Park, London

Head Teacher: Mr. J. Mitchell

NORTHUMBERLAND

KING EDWARD VI SCHOOL

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

activities according to the

school's needs. Further infor-

mation and application forms

available from the Head-

teacher. Closing date for

applications: Monday, 30th

June 1986. 133822

(17850)

REDBRIDGE

PART-TIME WOODWIND

TEACHER REQUIRED

A part-time teacher

involvement 17 1/2 hours of

woodwind instruments

(Scale 1) is required from

September, 1986. A flute

player and a clarinet player

are also required. Some

elementary clarinet/

oboe teaching would also

be required. Salary: £6,300

per annum. Details of

application forms and

curriculum vitae should be

sent to the Head Teacher,

enclosing full address

immediately. 133822

(17850)

RICHMOND

UPON THAMES

LONDON BOROUGH OF

THAMES

(An Equal Opportunity

Employer)

RECHTLY SCHOOL

Harrow Road, London

Head Teacher: Mr. J. Mitchell

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

activities according to the

school's needs. Further infor-

mation and application forms

available from the Head-

teacher. Closing date for

applications: Monday, 30th

June 1986. 133822

(17850)

ROME

HOUNSLOW

CRANFORD COMMUNITY

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

activities according to the

school's needs. Further infor-

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available from the Head-

teacher. Closing date for

applications: Monday, 30th

June 1986. 133822

(17850)

SUFFOLK

COUNTY COUNCIL

Please see displayed adver-

tisements on Page 75. 133822

(17850)

SURREY

EDUCATION COMMITTEE

11-16 Co-educational

Group 11

Required for September, 1986

Teacher of Music (Scale 1) to

share teaching of Music

throughout the school and to

maintain and develop music

activities according to the

school's needs. Further infor-

WILTSHIRE

COUNTY COUNCIL

Please see displayed adver-

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COUNTY COUNCIL

Please see displayed adver-

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(17850)

WILTSH

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November 1986 at

740 boys have a high ability of 150 boys all of them. The School class sporting equipment covered, swimming pool, a large gymnasium, playing fields, could require a E.E. specialization one post the ability to

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HIRE

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P.E. SCALE 1.
Required for Sept
teacher of Girls Phy
Education. Applicants
be enthusiastic lively
able to teach all m
sports. The applicant
be in charge of all net
and hockey teams.

Please contact the H
teacher for further de

Required for September 1986 initially. Candidates besides traditional board games should be able to offer mixed P.E. to the pupils.

Application forms further details from Headmaster at the school Closing date 7th July 1986 (17916)

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Closing date 1
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 of two referees.
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102
LINCOLNSHIRE

QUEEN'S PARK HIGH SCHOOL
South Park, Lincoln LN5 8EW
Roll 80
Experienced teacher of mentally handicapped children with particular interest in the needs of the profoundly handicapped.

child (Sept 30 - \$54) required
from September or as soon as
SAE to Head for form and
details. Closing date 27 June
1986. (T31), (T298) 160025

LINCOLN
5 CHRISTOPHER'S SCHOOL
Rykeham Road, Lincoln LN6
5AR
Assistant Teacher required full
September or as soon as possible
thereafter for a class of
children with moderate
learning difficulties.
Scale 1 & \$554.
from September or as soon as
details. Closing date 27 June
1986. (T31), (T281) 160025

OLDHAM
METROPOLITAN BOROUGH
OF OLDHAM
SPECIAL EDUCATION COMMITTEE
100, MARKET STREET
MANCHESTER M4 1JF

**Senior Road, Flitton Hill,
TEACHEr, Scale 15)
Required for September 1986.
STUDY EACH ENVIRONMENTAL
The successful candidate will
approach, using stories and
approach as a means of stimulation.
literature and have a love of
for the creative arts.
School experience
Please apply by letter to the
Full C. at the school including
of 2 references by 20th June.
An Equal Opportunity Em-
ployer. (11105) 160029**

OLDHAM
METROPOLITAN BOROUGH
OF OLDHAM
EDUCATION COMMITTEE
FOREIGN BORN TEACHERS
Foxenden Lane, Chadderton,
Oldham
Required as **TEACHERS - Scale 1/5**
for children with severe learning
difficulties. Nursery/Infant
experience would be an advantage
although not essential.
One post is temporary to 31st
August 1982.
Please apply by letter to the
Principal at the school including
three references and 200th Jour-
nal of the Institute of Education
An Equal Opportunity Em-
ployer. (17106) 160032

**AL SERVICES
(OF LIVERPOOL)**
scolar Education
THE SCHOOL
ing, Nr. Wigan.
as a Residential School for boys
al needs and now provides for 65
ECTS TEACHER
E 1.

LECT TEACHER

CONFIDENTIAL

SOCIAL WORKERS (POSTS)

**s please apply to the
donal Children's Home,
Ambrose Lane,
s AL5 4DA. Tel: Harpenden**

HOWELL'S SCHOOL
Donagh, Clwyd LL16 3EN
An Independent Leading
School for Girls with 350
pupils aged from 7-18
RESIDENT
HOMESISTERS
Required, preferably for
September 1986, an
excellent Housemistress to
share responsibility for 60
girls in the Sixth Form. The
post would suit an enthus-

The Salary. will be based on Burnham Scale and applicants should indicate which subjects they are prepared to offer, and to what level.

Letters of application, giving full details of qualifications and experience, including names and addresses of two referees, should be sent to the headmaster at the above address, from whom further details can be obtained.

available: (19924) 184024

**SHROPSHIRE
ADDCOTTS SCHOOL**
Little Ness, Shrewsbury SY4
2JY
Tel: 0935 260302
GSA Boarding/Day School for
girls aged 5 - 15 years
Required for September 1986
an experienced fully qualified
female teacher as resident
Housemistress, to be responsi-
ble for the girls

Apply in writing to the Headmistress, giving full curriculum vitae, academic subject offered and names and addresses of two referees. (18291) 184024

SURREY
ST. TERESA'S CONVENT
SCHOOL
Effingham Hill, Dorking,
Surrey
Girls Independent Day/
Boarding
Full-time RESIDENT A56IS-
TANT required in Boarding
House to supervise girls
in dormitory at night and help
generally during term-time, in-
cluding weekends. Salary by
arrangement. Accommodation
available term-time.

experience with young people and
 driving licence useful. Practising
 Christian preferred.
 Apply in writing to the Head-
 mistress giving details of ex-
 perience and qualifications,
 and names and addresses of two
 referees. (13467) 184024

Assistant single ASSISTANT required
HOUSEMASTER required
September for classroom building
ing school which teach to 'O
level and specialising in helping
bright boys with dyslexia.
Your own subjects acceptable.
Mathematical/Computer Studies
particularly welcome.
Burnham scale 1, free accom-
modation etc.
For full information write to
the Headmaster or Tel: 08866
223. (19985) 184024

Physical Education

Other Assistants

BERKSHIRE
THE LICENSED
VISUALISERS' SCHOOL
SLOUGH SLT LXP
A post which would suit a recently qualified teacher of Physical Education will become available at co-educational independent school in September.

ber of this year. The school is equipped with good indoor and outdoor facilities including swimming pool, sports hall and multi-gym. There are five full-time teachers of P.E. There is consequently a good deal of flexibility in fitting the post around the areas of speciality of the person appointing and the potential contribution to the P.E. department will be the main basis of selection. It would on the other hand be

helpful if the person appointed was able to teach some English and/or History and an ability to offer help with a foreign language formed rowing club would be useful.

Residential accommodation could be provided for someone willing to assist with the supervision and organisation of boarding pupils.

Applications which should include the name and address of the referees and curriculum vitae should be sent to the

**BERKSHIRE
THE ABBEY SCHOOL**

Reading, Berkshire
INDEPENDENT
Required in September 1986.
teacher of **PHYSICAL EDUCATION**.
The school has a heated indoor swimming pool and pool facilities for physical education.
Please apply to the Headmistress with full Curriculum vitae: (19821) 18422

of this year. The school is equipped with good indoor sports facilities including a swimming pool, gymnasium and lawn and there are five resident teachers of P.E. There is no question of the need for a good standard of flexibility in fitting the needs of the person appointed to the post. The P.E. Department will be expected to make a substantial contribution to the general contribution of the school on the other hand he will be expected to be able to take on the role of a teacher of English or History and to be able to help with a variety of other subjects. A residential accommodation will be provided for someone to assist with the supervision and organization of the boarding pupils.

Persons of whom enquiries should be made of which should include the names and addresses of two referees. The referees whom should be addressed to the Headmaster, The Needham School, Bournemouth, Dorset, BH1 2AA.

For further information please apply to Mr. J. S. B. (11183).

RESHRIRE
THE ASBEY SCHOOL
Barnes, Berkshire
Telephone: 25255
The school was founded in September 1986, a co-educational boarding school for 18-19 year olds. The school has a heated indoor swimming pool and good facilities for the study of the sciences and languages. The school is a member of the Headmasters' Association. Please apply to the Headmaster, The Asbey School, Barnes, Berkshire, RG4 2AA. Tel: (1921) 351182.

COLLEGES OF FURTHER EDUCATION

EAST SUSSEX

LEWES TECHNICAL COLLEGE

LECTURER 1 IN OFFICE SKILLS

Required for September 1986 to teach Office Skills, Typewriting, and Office Practice.

An interest in Word Processing and Computer Literacy would be an advantage.

Further details and application form from the Principal, Lewes Technical College, Lewes, East Sussex, Tel: (0232) 47151. 220026 (17823)

REDBRIDGE TECHNICAL COLLEGE

Little Heath, Romford, Essex RM6 4XT

Required for September 1986

LECTURERS 1 IN:

COMPUTING/BUSINESS STUDIES

SECRETARIAL SKILLS

COMPUTING/ELECTRONICS

*HORTICULTURE (0.5)

*SECRETARIAL SKILLS (0.5)

* Associate Lecturer (Half-term appointments)

Forms and further particulars from the Principal at above address.



BRIGHTON COLLEGE OF TECHNOLOGY

The following staff are required from September to assist with the wide range of work in the department.

L1 in Government & Political Studies and Public Administration (Ref 720)

L1 for YTS work and Management Studies (Ref 899)

These appointments are one year fixed term contracts.

L1 in Secretarial Studies

This appointment is temporary to cover a member of staff on Maternity Leave (Ref 712).

The successful applicants will be expected to contribute to a range of courses and to other subjects in addition to those specified above.

Details and application forms available from the Personnel Office, Brighton College of Technology, Palm Street, Brighton BN1 4FA. Telephone (0273) 888971.

Closing date: June 27. (Please quote Post Ref.)

(15429)

HERTFORDSHIRE COUNTY COUNCIL

The Hertfordshire College of Building
St Peter's Road, St Albans, Hertfordshire AL1 3RX
Telephone: St Albans 54273

Required from 1st September 1986

Senior Lecturer in Building Services Engineering

To teach elements of Building Services Engineering Design Technology up to and including first degree level. It is anticipated that the successful candidate will possess at least a first degree in Environmental Engineering or Building Services Engineering, and will be a full Corporate Member of the Chartered Institution of Building Services Engineers. Knowledge and experience in Heating, Ventilation & Air Conditioning will be essential and similar expertise of Electricity and/or Lighting in the building services context will be an advantage.

Salary will be on a scale within the range £11,956 - £15,045 p.a. plus £264 p.a. outer fringe allowance.

Application forms, returnable by 27th June 1986, and further details may be obtained from the Principal.

(15422)

HERTFORDSHIRE

DEPARTMENT OF BUSINESS AND MANAGEMENT EDUCATION

LECTURER GRADE II IN ACCOUNTING

To teach Financial, Management and Cost Accounting to a range of BTEC and professional courses.

Applicants should have an undergraduate degree and/or professional accounting qualification. The successful candidate may be required to undertake administrative responsibilities for one or more of the department's courses.

For further details and application form available from the Principal, Secretary, North Herts College, Cambridge Road, Hitchin, Herts. SG4 0JN. Closing date: 27th June 1986. 220026 (17732)

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DORSET

POOLE COLLEGE OF FURTHER EDUCATION

LECTURER GRADE I IN ECONOMICS

Required for 1st September 1986. To teach Economics to a range of BTEC and professional courses.

Applicants should have an undergraduate degree and/or professional accounting qualification. The successful candidate may be required to undertake administrative responsibilities for one or more of the department's courses.

For further details and application form available from the Principal, Secretary, North Herts College, Cambridge Road, Hitchin, Herts. SG4 0JN. Closing date: 27th June 1986. 220026 (17732)

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HERTFORDSHIRE

COUNTY COUNCIL

ST. ALBANS COLLEGE

DEPARTMENT OF ENGINEERING

LECTURER I IN ELECTRONIC ENGINEERING

Applications are invited from suitably qualified persons for the above post, commencing 1st September 1986 or as soon as possible thereafter.

The person appointed will be required to teach Electronic subjects on school links, VET and other courses up to National Certificate level with opportunities for higher level work.

Salary in accordance with National Scale £6,324 - £11,247 (plus 10% London Fringe Allowance).

Application form and further details from the Principal, St. Albans College, St. Albans, Herts. AL1 3RX. Tel: St. Albans 54273.

Closing date for applications: 27th June 1986. (19074)

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HAMPSHIRE

THE TERTIARY COLLEGE

LECTURER 1 IN BIOLOGY

To teach Biology to a range of BTEC and professional courses.

Applicants should have an undergraduate degree and/or professional accounting qualification. The successful candidate may be required to undertake administrative responsibilities for one or more of the department's courses.

For further details and application form available from the Principal, Secretary, North Herts College, Cambridge Road, Hitchin, Herts. SG4 0JN. Closing date: 27th June 1986. 220026 (17732)

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HAMPSHIRE

COUNTY COUNCIL

SOLOFTON TECHNICAL COLLEGE

LECTURER 1 IN BIOLOGY

To teach Biology to a range of BTEC and professional courses.

Applicants should have an undergraduate degree and/or professional accounting qualification. The successful candidate may be required to undertake administrative responsibilities for one or more of the department's courses.

For further details and application form available from the Principal, Secretary, North Herts College, Cambridge Road, Hitchin, Herts. SG4 0JN. Closing date: 27th June 1986. 220026 (17732)

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COUNTY YOUTH AND COMMUNITY OFFICER

£16,785-£18,273
Soulbury Gp8

A person with substantial practical and managerial experience of youth work is sought to lead a new and restructured County Youth and Community Service. Further details and application forms are available from: The Chief Education Officer, Education Department, Shire Hall, Gloucester GL1 2TP, or telephone: Gloucester 425337. Closing date: 30th June, 1986.

Gloucestershire County Council

AN EQUAL OPPORTUNITIES EMPLOYER

YOUTH & COMMUNITY continued

BIRMINGHAM
DIOCESE OF BIRMINGHAM
YOUTH WORK OFFICER
An opportunity for a lay person or priest to advise and support church-sponsored youth work of all kinds in youth work of all kinds in the diocese, to work as a member of an educational team, and to collaborate with advisers in local authorities and voluntary organisations. Details and forms (returnable by 30th June) from the Diocese of Birmingham, Church House, Harborne Park Road, Birmingham B17 0BH (021 427 5141). 440000 (13074)

CHESHIRE
EDUCATION COMMITTEE
HALTON DISTRICT
EDUCATION OFFICER
GRANGEWAY YOUTH AND COMMUNITY CENTRE
CENTRE MANAGER
(JNC RANGE 40) £10,770-£12,018 p.a.

Applications are invited from suitably qualified and experienced persons for the above post. We are seeking an enthusiastic person who will have proven ability to manage and administer the Centre and lead the staff team (including two full-time youth and community workers) in developing the Centre's activities.

Qualifications and salary are in accordance with the JNC Scheme for Youth Workers and Community Centre Wardens. Application forms and further particulars are available from: The District Education Officer, Grosvenor House, Grosvenor Road, Chester, Cheshire, CH1 4BQ. Closing date: 18th June 1986. 440000 (19255)

HOUSLOW
FELTHAM SCHOOL
See under Physical Education. (17854)

Youth & Community Worker

£9,591 - £10,734

Woking

The post demands energy, enthusiasm and the ability to lead a team of part-time youth workers and volunteers. (A part time deputy assistant post is being considered). You will operate a comprehensive programme of personal and social education and must be able to make contact with and encourage the young people of the area to use the Centre. A current driving licence is desirable as one Centre owns a minibus.

The Youth & Community Service has a Staff Development Policy accredited by INSTEP and provides in-service training, relocation assistance and temporary housing may be available. Closing date 30 June 1986.

Application form from NW Area Youth & Community Office, Area Education Officer, Woking, Surrey GU11 7EU.

SURREY
COUNTY COUNCIL

CHESHIRE
EDUCATION COMMITTEE
COUNSELLING, ACTION AND TRAINING CENTRE
HEATON
PROJECT WORKER
OUTREACH ADVISER
TRAINING/JNC RANGE 3
£8,535 - £9,594 p.a. (34 years only)

A committed enthusiastic and experienced Youth Worker is required to join a small team of professionals working in Widdow and Hutton mainly with post-16 young unemployed. Applicants should have an interest in developing new strategies to meet the needs of the young unemployed and be committed to outreach as a method of making contact with them. The project is Urban funded and has 3.5 years remaining.

Application forms and further details are available from: The District Education Officer, Grosvenor House, Grosvenor Road, Chester, Cheshire, CH1 4BQ. Closing date 30 June 1986. 440000 (18536)

EAST SUSSEX

EASTBOURNE COLLEGE OF ARTS & TECHNOLOGY
St. Anne's Road,
Eastbourne BN21 2HS
Principal: J.M. Williams,
M.Ed. and R.E.M.A., F.R.S.A.
DISTRICT YOUTH
WORKER (Temporary until
31.3.88)

A qualified and experienced person is sought for this important post. The successful applicant will join a team working with the new Youth Service Unit at Eastbourne College of Arts & Technology and will be closely involved in implementing the Authority's development plan for the Youth Service in East Sussex.

Salary: £10,470-£11,685.

Further details and application form from the Principal.

Tel: Eastbourne (0323) 644711, Ext. 212.
Closing date: June 27, 1986. 440000 (17823)

LEICESTERSHIRE
COUNTY COUNCIL
An Equal Opportunity Employer

YOUTH WORKERS AT WYVERN CENTRE
CHILDES KEEPER
COLLEGE

(a) Full time, JNC 2 £6,597 p.a. To take responsibility for the educational programme of the college.

(b) Full time, JNC 2 £6,597 p.a. To take responsibility for working with young women.

(c) Half time, JNC 2 £3,448.50 p.a. To take responsibility for the development of outdoor pursuits.

Application forms on receipt of SAE from JNC 2, 26, 517 p.a. To take responsibility for working with young women.

Closing date: 27th June 1986. 440000 (17424)

LINCOLNSHIRE
FULL-TIME ASSISTANT
YOUTH WORKER
Lincoln, 50.0100

Applications are invited from qualified youth workers for this post which is funded by the County Council.

The person appointed will assist the full-time area youth worker with the organisation, management and leadership of the St. Giles Youth Centre.

The person appointed will assist the full-time area youth worker with the organisation, management and leadership of the St. Giles Youth Centre.

Application forms and further particulars are available from: The Director of Education, County Offices, Lincoln, Lincoln LN1 1YQ. Closing date: 27th June 1986. 440000 (17265)

REFORM SYNAGOGUES OF GREAT BRITAIN

Invites applications from dynamic, energetic persons of appropriate experience for the post of

YOUTH FIELD WORKER

Candidates should preferably have relevant qualifications and be capable of dealing with a varied programme of national and local activities. The position will involve frequent visits to youth groups in both London and the provinces. Knowledge and understanding of Jewish programming and of leadership training is required, and salary will be commensurate with qualifications and experience (JNC Range 2-3).

For further details, please contact Suzanne Zelut, Department of Education and Youth, RSGB, 80 East End Road, Finchley, London N3 2BY. Tel: 01-348 4731

YOUTH & COMMUNITY
continued

HAMPSHIRE
COUNTY COUNCIL
BASINGSTOKE AND DEANE
PORT HILL COMMUNITY
YOUTH CENTRE
POST OF DEPUTY
COMMUNITY EDUCATION
WARDEN

Required: September 1986. The person appointed will be responsible for the day-to-day running of the youth centre and will be involved in the provision of a wide range of activities for young people.

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LEICESTERSHIRE
COUNTY COUNCIL
An Equal Opportunity Employer

HINDS LEVEE
COMMUNITY COLLEGE
Forest Street, Shepperton,
Middlesex UB8 3PH
LE15 0DB
(14-18 Upper)
NOK 750

COMMUNITY TUTOR
(YOUTH)
SCALE F.E. LECTURE I

Required: September 1986. The person appointed will be responsible for the day-to-day running of the youth centre and will be involved in the provision of a wide range of activities for young people.

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WESTSUSSEX
FOREST COMMUNITY
SCHOOL
Compton Lane, Horsham,
West Sussex RH13 5N
11-16 Hrs/Comp. NOR
992

EDUCATION ORGANISER
Required: September 1986. The person appointed will be responsible for the day-to-day running of the youth centre and will be involved in the provision of a wide range of activities for young people.

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